Europe Bill Acceptor

EB-100
EB-200

Service Manual

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Japan Cash Machine Bill Acceptors

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Service Manual EB-100/200

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Europe Bill Acceptor

EB-100
EB-200

Specifications

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1 General Specification

1 Type of currency accepted	See relevant specification
2 Direction of insertion	See relevant specification
3 Acceptance ratio:	95% or more in high acceptance mode 90% or more in normal acceptance mode Including returning first time, and accepting second time. Here, bills below are excluded: (1) Dirty, worn, wet, torn and badly wrinkled bills. (2) Bill with corner or edge folded and overlapped. (3) Bills with cutting size or printing deviated
4 Discrimination time	Approx. 2 seconds (Time from insertion of bill until credit pulse or credit signals is output)
5 Interface	Output: TTL (74IS07 Open collector) Input: TTL (74VHC14 22Kohms pull-up)
6 Stacking function	Available (Approx.400 circulating bills stacked) (1) Bills can be taken out from back and front (2) Doors open and close is detected (Both for back and front) (3) Full stacking is detected
7 Escrow	See specifications by type on the separate sheet.
8 Display	Located (1) LED ON signal output 2 lines during bill reception enabled status. (2) LED ON signal output 2 lines during error detection and trouble status.
9 Power supply	DC 12V (±5%)
10 Power consumption	(1) Standby status: 5VA (3) Operation status: 10VA (max. 19VA)
11 Operating environment	(1) Operating temperature: 5 to 50 c° (2) Storage temperature: -20 to 60 c° (3)Humidity: 30% to 85%RH (without condensation) (4) Light disturbance: Do not expose the unit to direct sunlight. (5) Installation: Indoors
12 Outside dimensions	See the attached drawing.
13 Weight	Main unit (with cassette box) Approx. 1.1kg
14 Installation	Horizontal installation

2 Optional Item

This discriminatior is provided with optional items. Contact our sales person for individual description.

Description of optional item

(MODEL) EB-200

(TYPE) * * * - * * * * * - 03

Country code ① ② ③ ④ ⑤ ID type

① Availability of I/F conversion board (scheduled)
0 - I/F conversion board unavailable
1 - I/F conversion board available

② Bill width regulation guide
Determined in plant by country in conformance with maximum width of bill to be discriminated.
(maximum width of bill to be discriminated is described)

1 – 67mm wide (minimum)
2 – 71mm wide
3 – 73mm wide
4 – 77mm wide

③ Front door type
0 – JCM standard front door
1 – JCM standard security front door

④ Back door type
0 – JCM standard back door
1 – JCM standard security back door

⑤ Spare

3 Interface

1 Outline of EB-200 interface

EB-100 is provided with bi-directional serial I/F (ID-003) and pulse I/F.
ID-003 I/F and pulse I/F can be chosen for use by changing DIP switch.

2 Outline of bi-directional serial I/F (ID-003)

Bi-directional serial interface (ID-003) is able to control the status and operation of acceptor or set and check its function through polling “STATUS REQUEST” and command (“OPERATION COMMAND” and “SETTING COMMAND”) from controller.
See “Communication Specification ID-003” for communication specifications.
See the separate sheet “ID-003 DATA setting specifications” for data configuration of denomination signal, etc.

3 Outline of pulse I/F

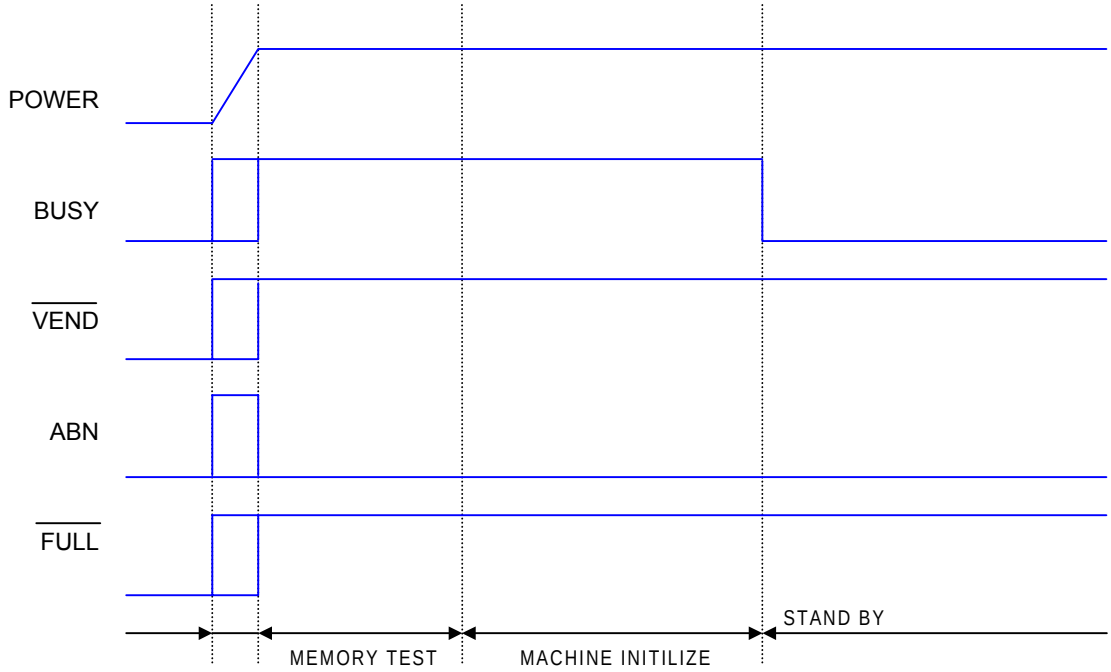
Pulse I/F outputs the denomination signal of accepted denomination by the preset number of pulses [*1] through VEND signal line (Pin No.1).

BUSY (Pin No.9), ABN (Pin No.11) and FULL (Pin No.12) signal outputs the status of acceptor.
Also, INH signal (Pin No.10) is capable of prohibiting acceptance of bill by acceptor.

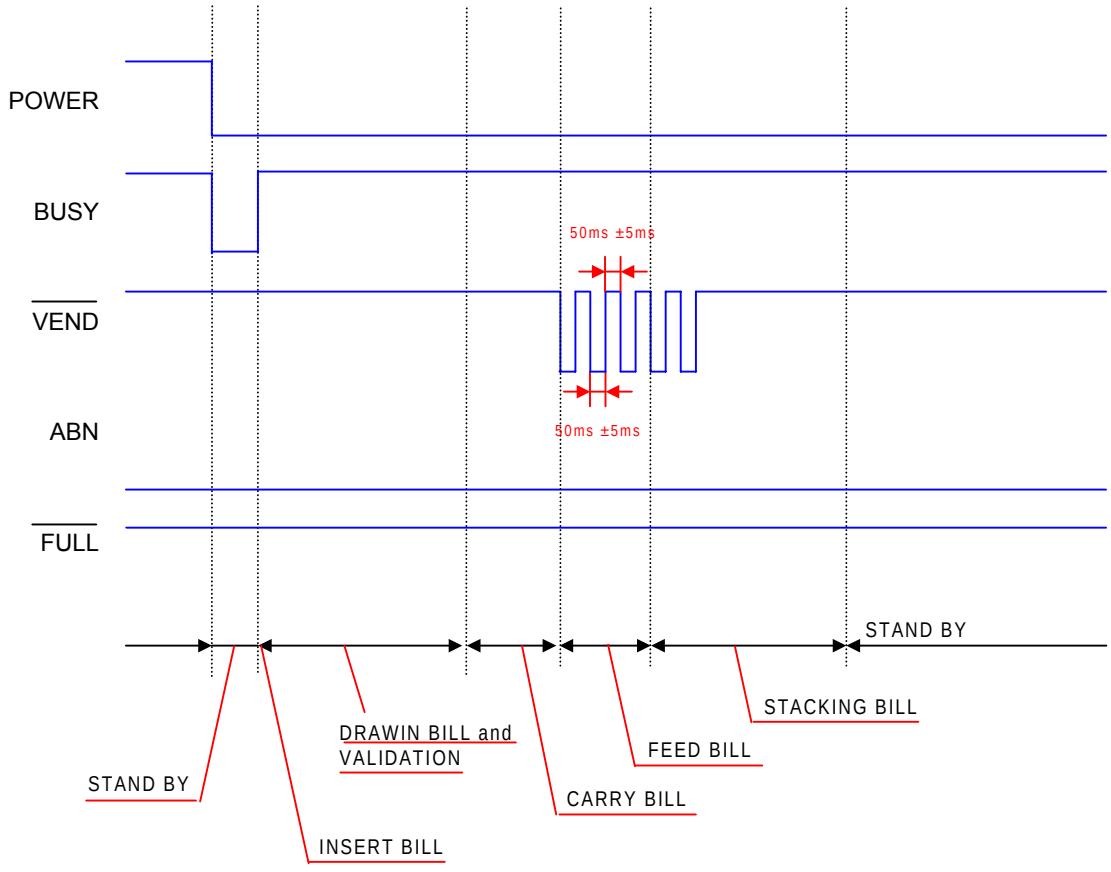
[*1] Number of pulses can be set by changing DIP switch (See 8. DIP switch).
Also, the number of pulses depends on a bill of a country.

4 Pulse I/F sequence chart

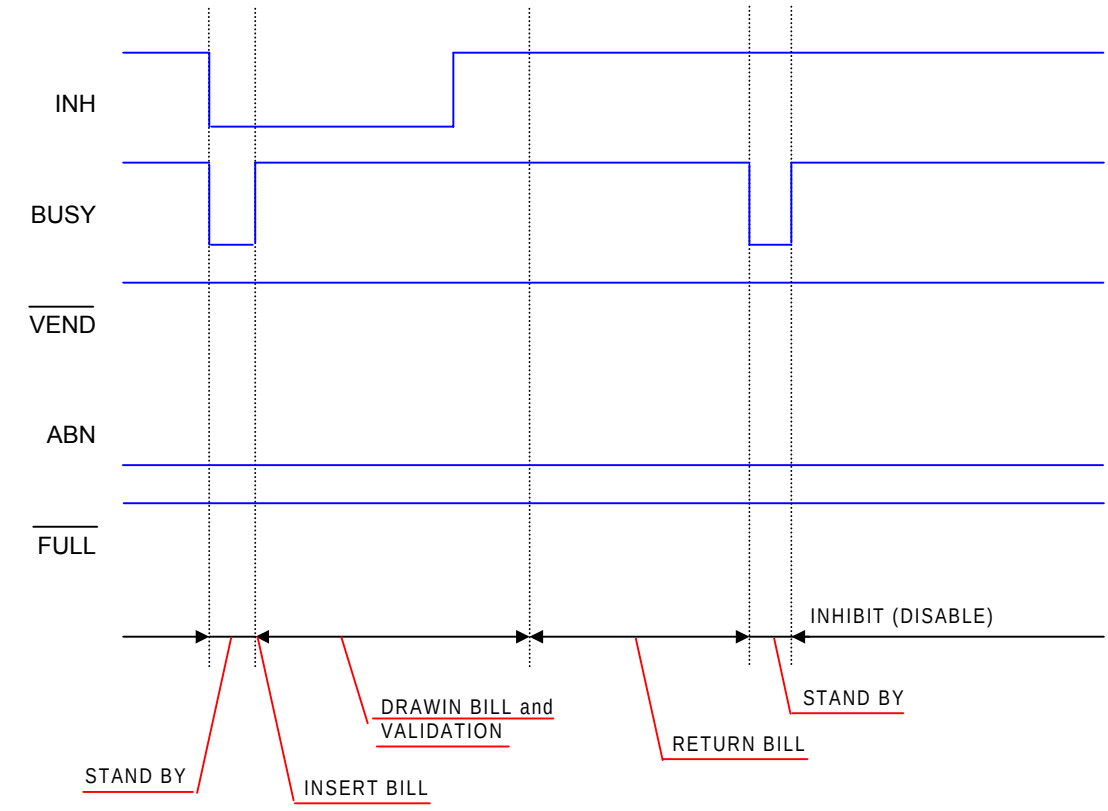
(1) POWER UP



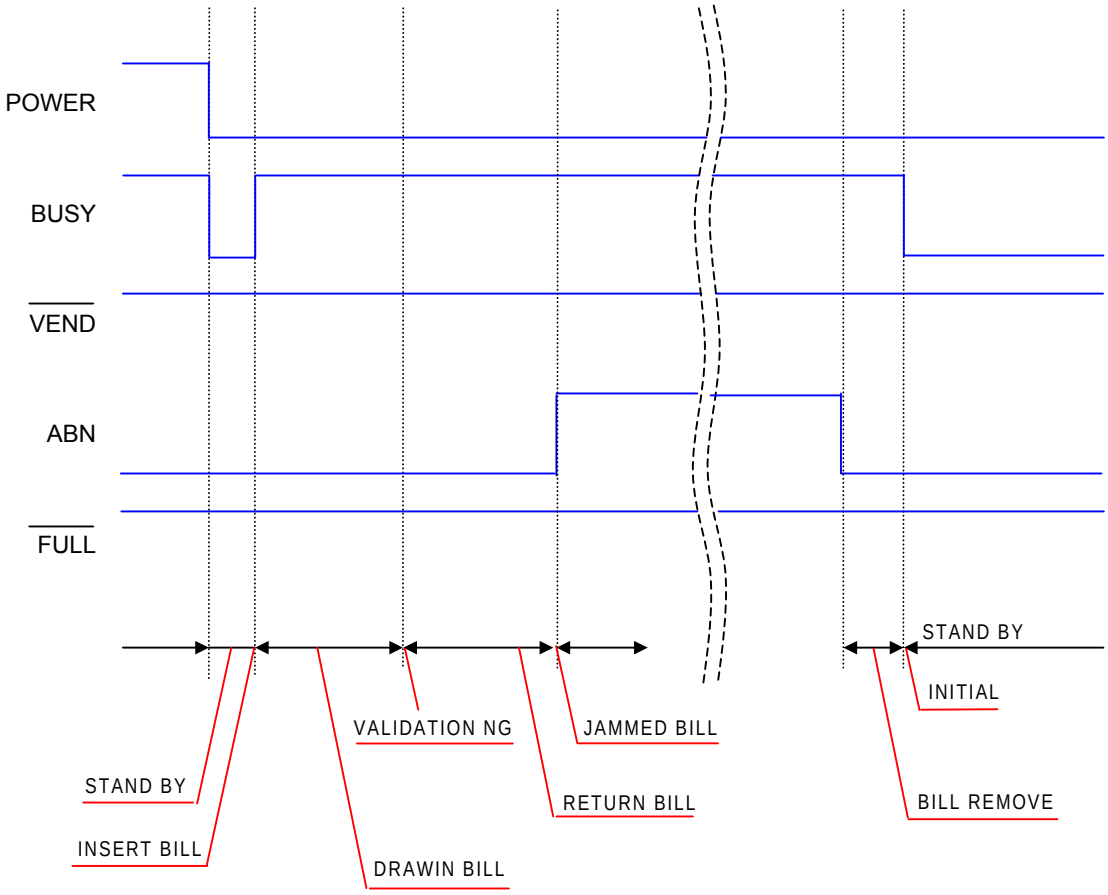
(2) ACCEPT BILL



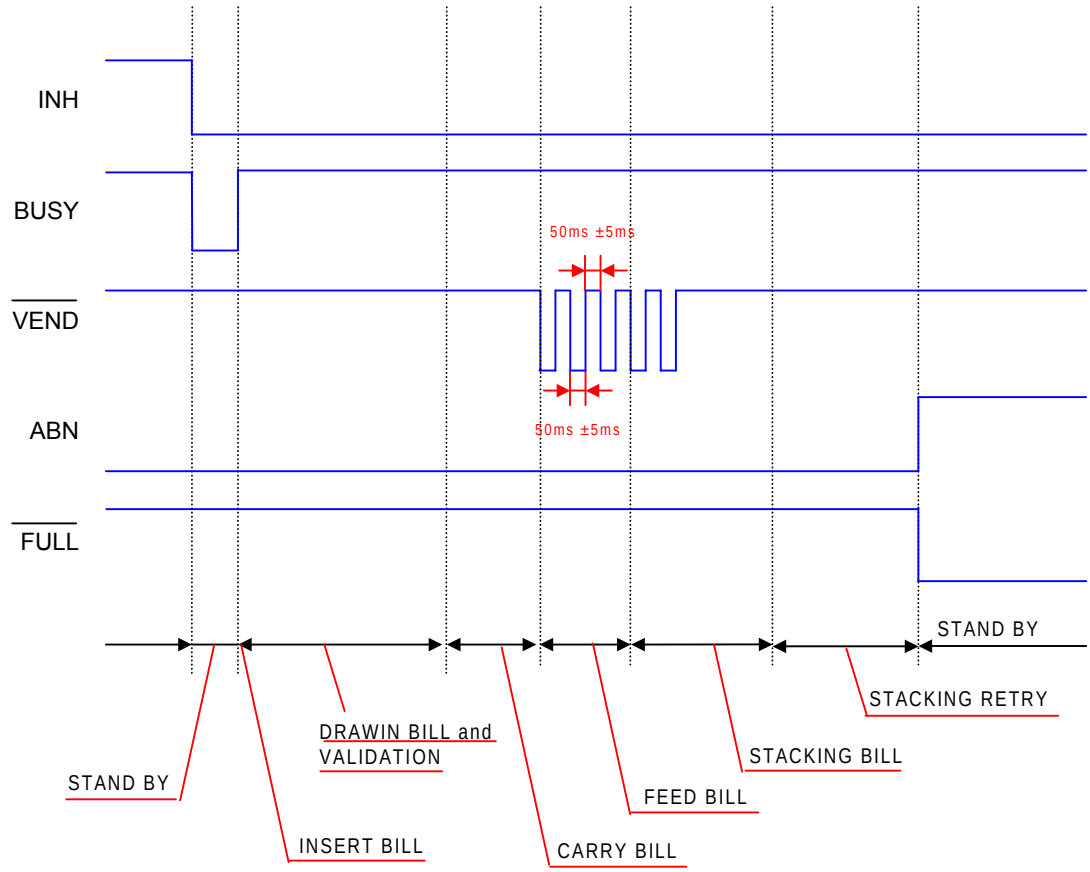
(3) REJECT BILL (returning by INH signal)



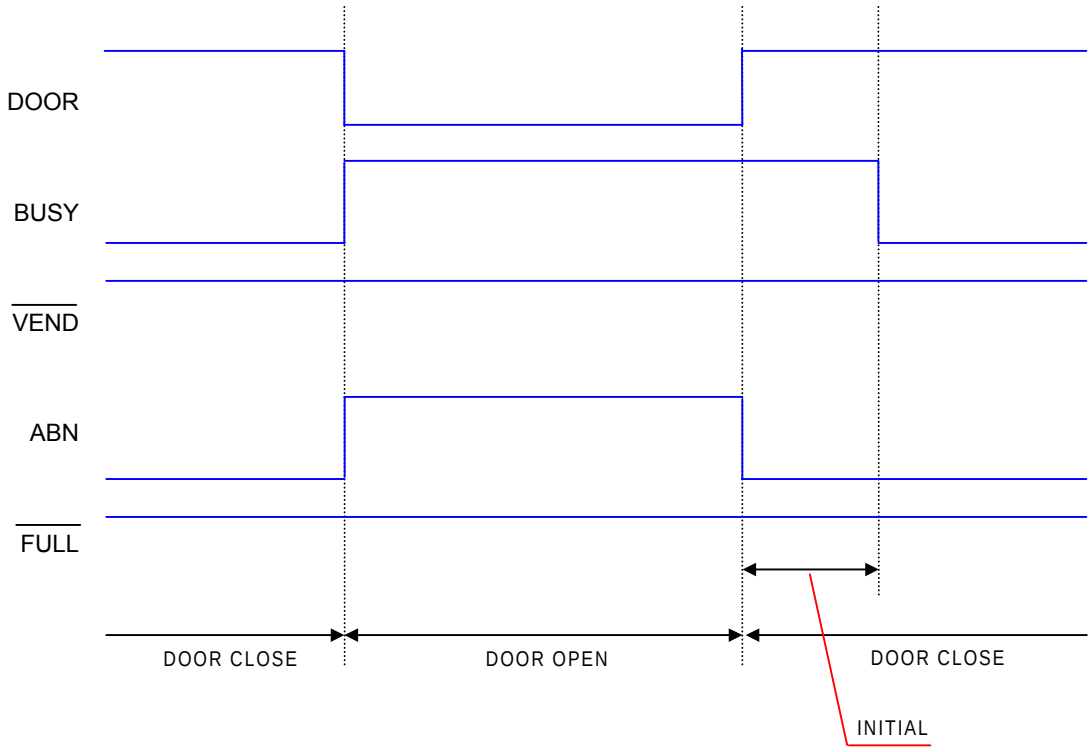
(4) JAMMED BILL



(5) STACKER FULL

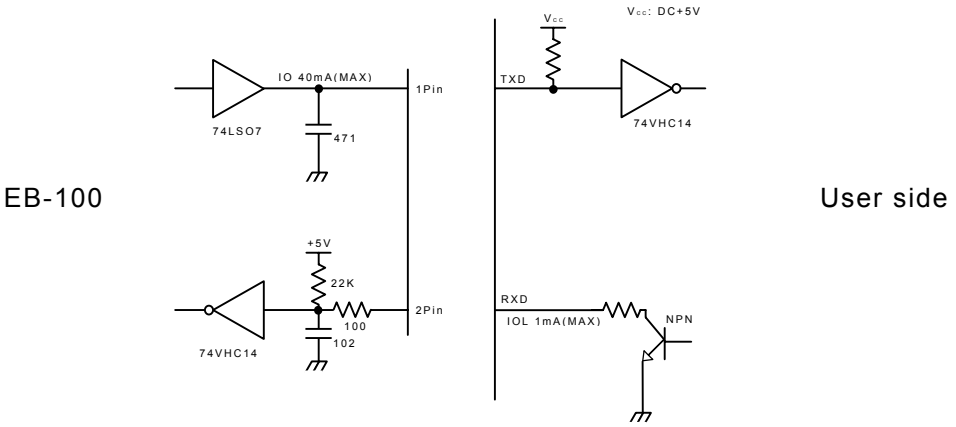


(6) DOOR OPEN / CLOSE

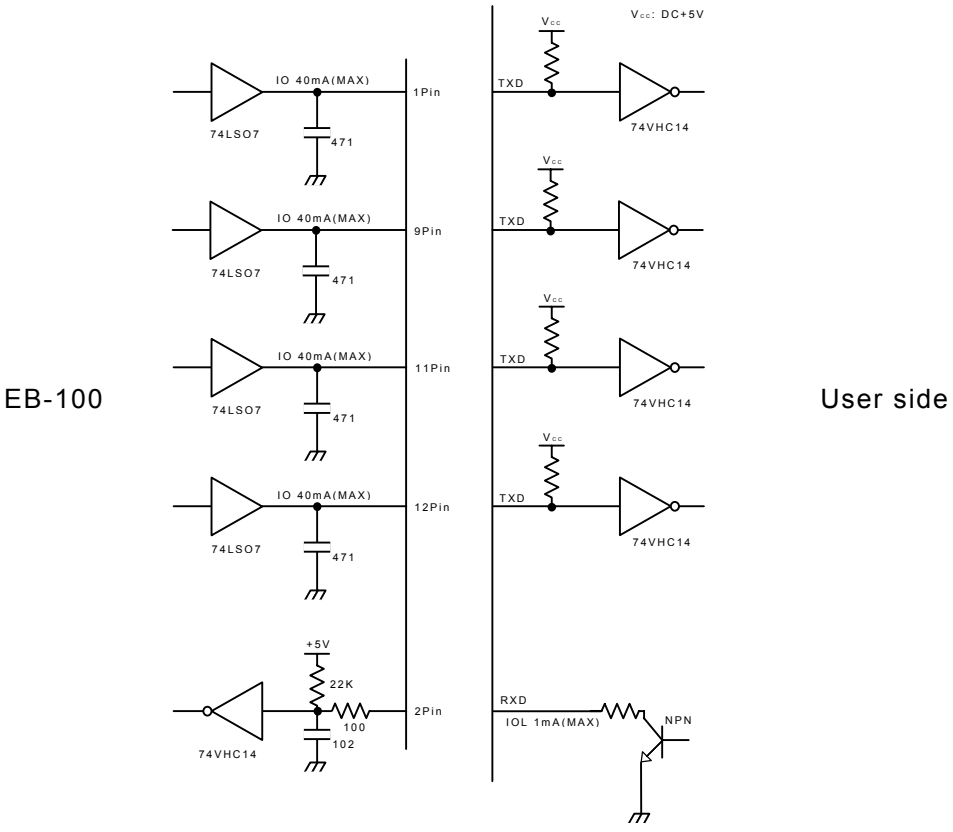


4 Interface Circuit

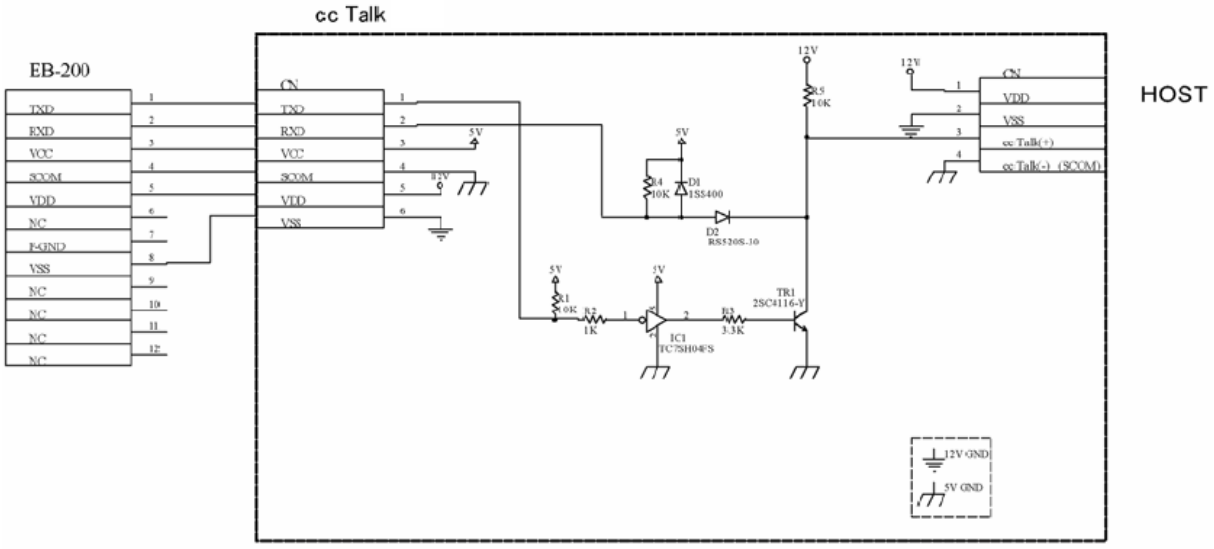
1. Bi-directional serial interface (ID-003)



2. Pulse interface

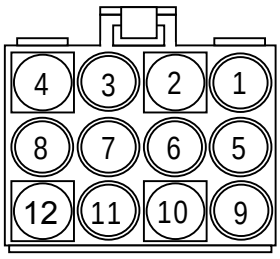


CCTalk interface



5 Pin assignment

1. In use by bi-directional serial I/F (ID-003)

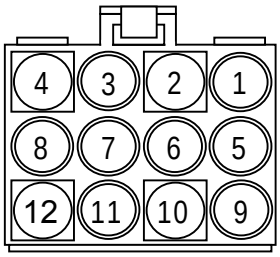


EDP No. for external Connection cable
078379

Connector pin arrangement
FRONT VIEW

Pin No.	Signal	I/O	Active	Explanation	Wire Size
1	TXD	OUT		Signal sending line of acceptor	AWG#26 UL1007
2	RXD	IN		Signal receiving line of acceptor	AWG#26 UL1007
3	V_{CC}	OUT		5V output (±5%) Max 20mA	AWG#26 UL1007
4	SCOM			GND for signal line	AWG#26 UL1007
5	V_{DD}	IN		Power supply 12V, (±5%)	AWG#26 UL1007
6	NC			It shall be unconnected	
7	F-GND			Connected to frame ground	AWG#26 UL1007
8	V_{SS}			GND for power supply 12V	AWG#26 UL1007
9	NC			It shall be unconnected	
10	NC			It shall be unconnected	
11	NC			It shall be unconnected	
12	NC			It shall be unconnected	

2. In use by pulse I/F

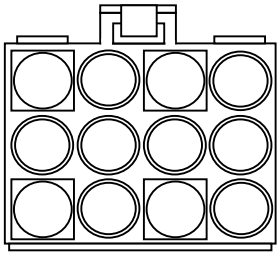


Connector pin arrangement
FRONT VIEW

Pin No.	Signal	I/O	Active	Explanation	Wire Size
1	VEND	OUT	LO	Bill acceptance denomination signal	AWG#26 UL1007
2	NC			It shall be unconnected	
3	V_{CC}	OUT		5V output (±5%), Max 20mA	AWG#26 UL1007
4	SCOM			GND for signal line	AWG#26 UL1007
5	V_{DD}	IN		Power supply 12V (±5%)	AWG#26 UL1007
6	NC			It shall be unconnected	
7	F-GND			Connected to frame ground	AWG#26 UL1007
8	V_{SS}			GND for power supply 12V	AWG#26 UL1007
9	BUSY	OUT	HI	Signal to be output when acceptor is operating	AWG#26 UL1007
10	INH	IN	HI	Bill acceptance inhibition signal (*1)	AWG#26 UL1007
11	ABN	OUT	HI	Signal to be output when any failure has occurred on acceptor	AWG#26 UL1007
12	FULL	OUT	LO	Signal to be output when bill stacker is full	AWG#26 UL1007

*1 When INH signal line is open, acceptor is inhibited from accepting a bill.
When INH signal is out of service, connect the pin 10 to SCOM.

6 Connector



Connector pin arrangement

FRONT VIEW

- Plug housing
  ELP-12V (JST)
  Material: Nylon 6, UL94-V0 white
- Socket contact
  SLF-01T-P1.3E

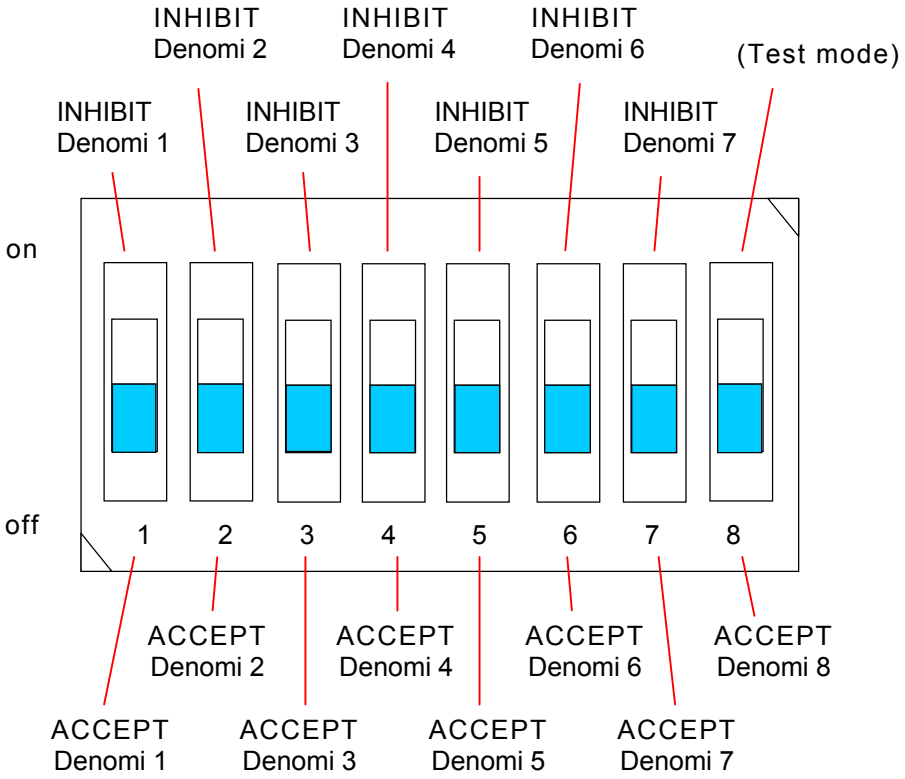
- Recommended receptacle housing
  ELP-12V (JST)
  Material: Nylon 6, UL94-V0 white
- Pin contact
  SLM-01T-P1.3E (AWG#26-20)
  SLM-41T-P1.3E (AWG#20-16)
- Recommended wire material
  Bulk wire
  UL 1007 (AWG#20-26)

7 Description of DIP switch

There are 2 DIP switches side by side on EB-200 CPU board.
DIP switch-1 is used for setting ACCEPT / INHIBIT of respective acceptance denomination.
DIP switch-2 is used for choice of I/F and setting detail of I/F.

1. Setting of DIP switch-1

   Acceptable denomination can be set by setting DIP switch.

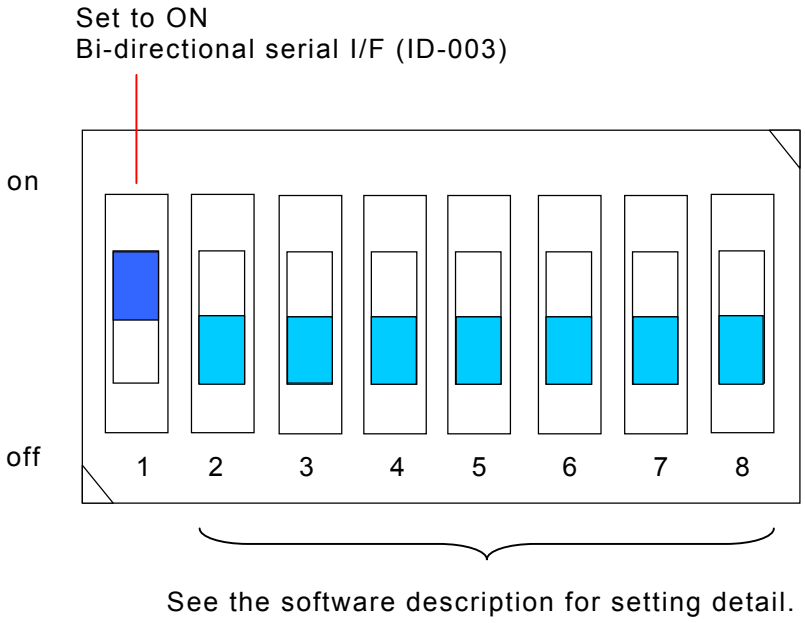


* See the Software description for setting detail.

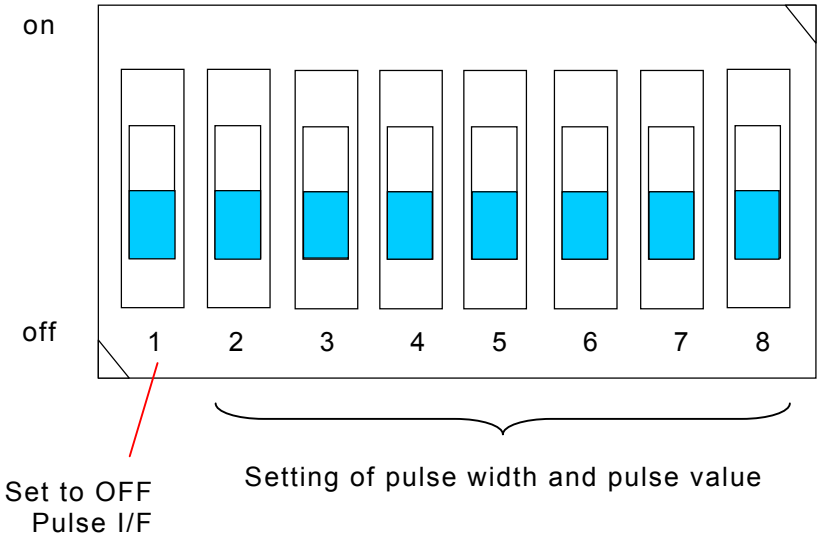
2. Setting of DIP switch-2

Choice of I/F, pulse width, pulse value, security, or the like can be set by setting DIP switch.

◎ When bi-directional serial I/F (ID-003) is used



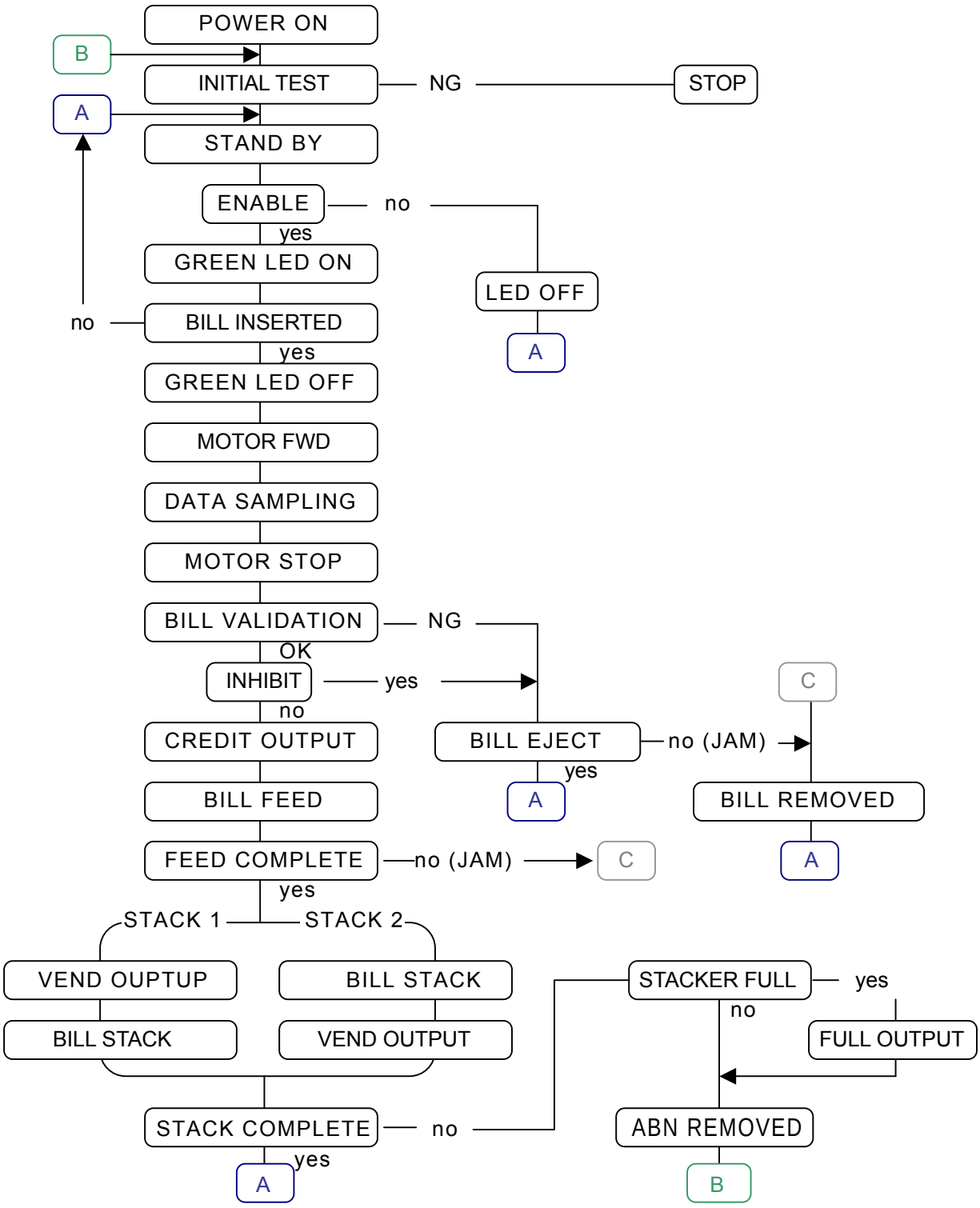
◎ When bi-directional serial I/F (ID-003) is not used



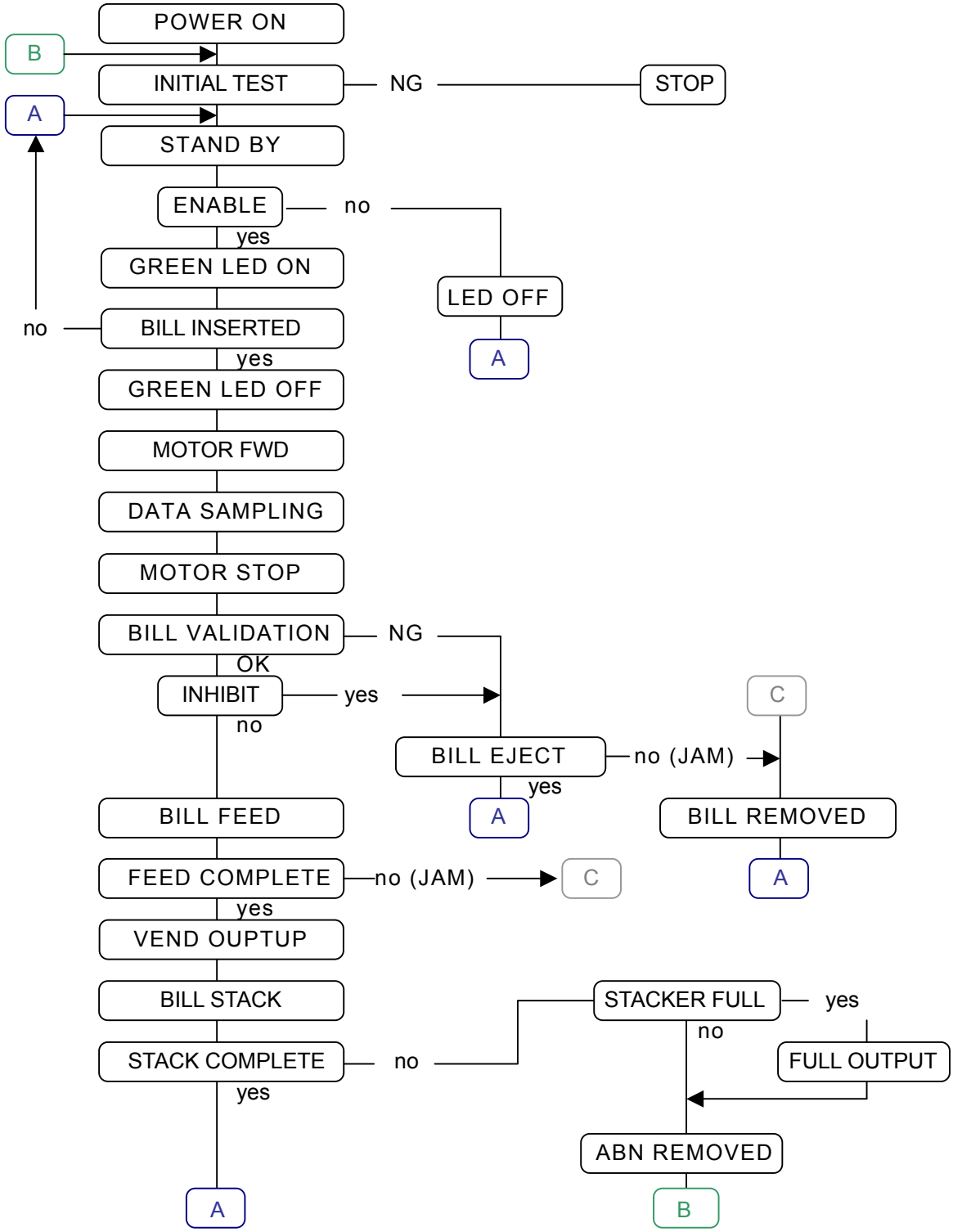
* Pulse value depends on a country. See the software description for setting detail.

8 Operation Flowchart

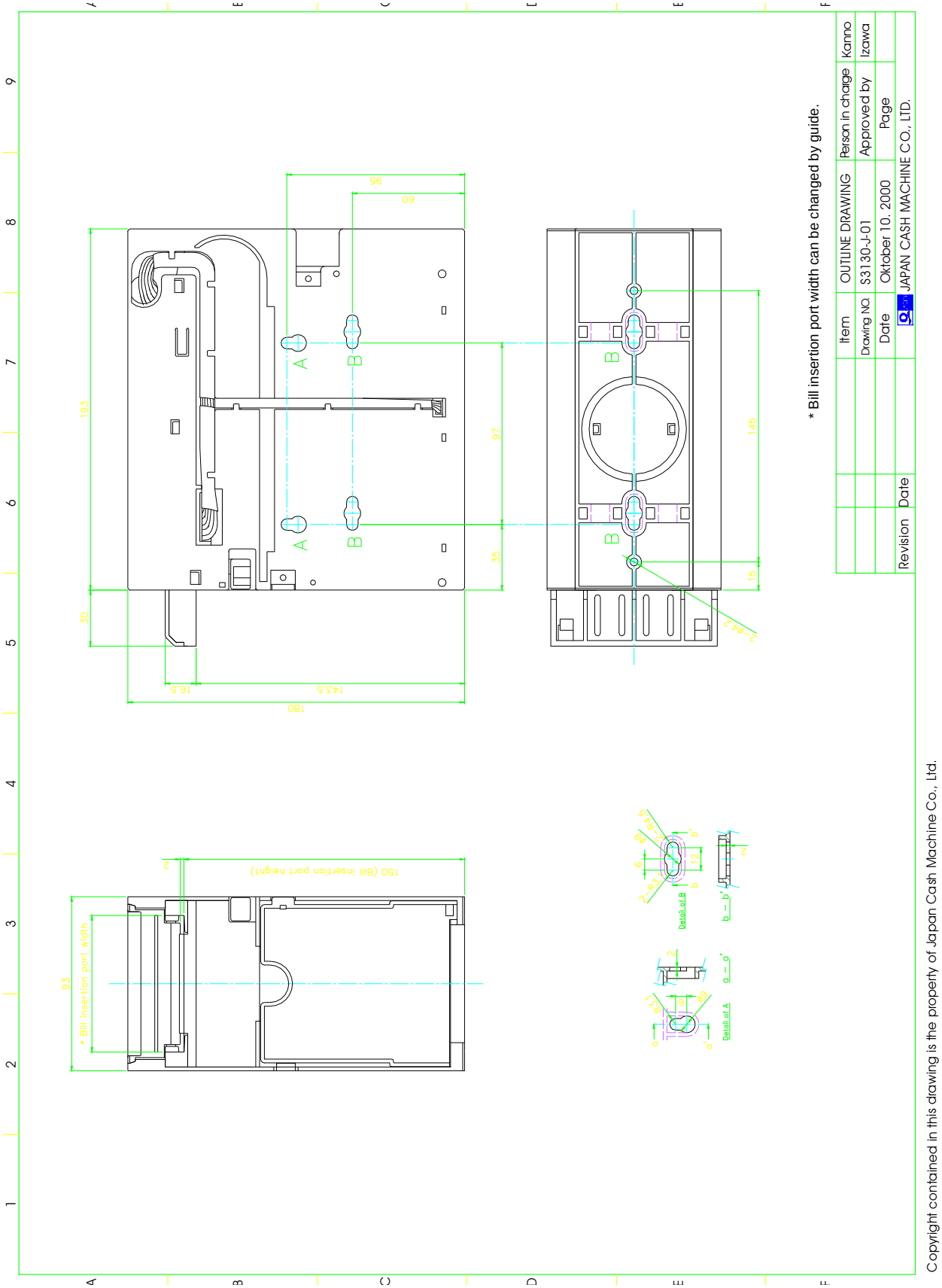
1. Bi-directional serial interface (ID-003)



2. Pulse interface



9 Outline Drawing



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Operation Specifications

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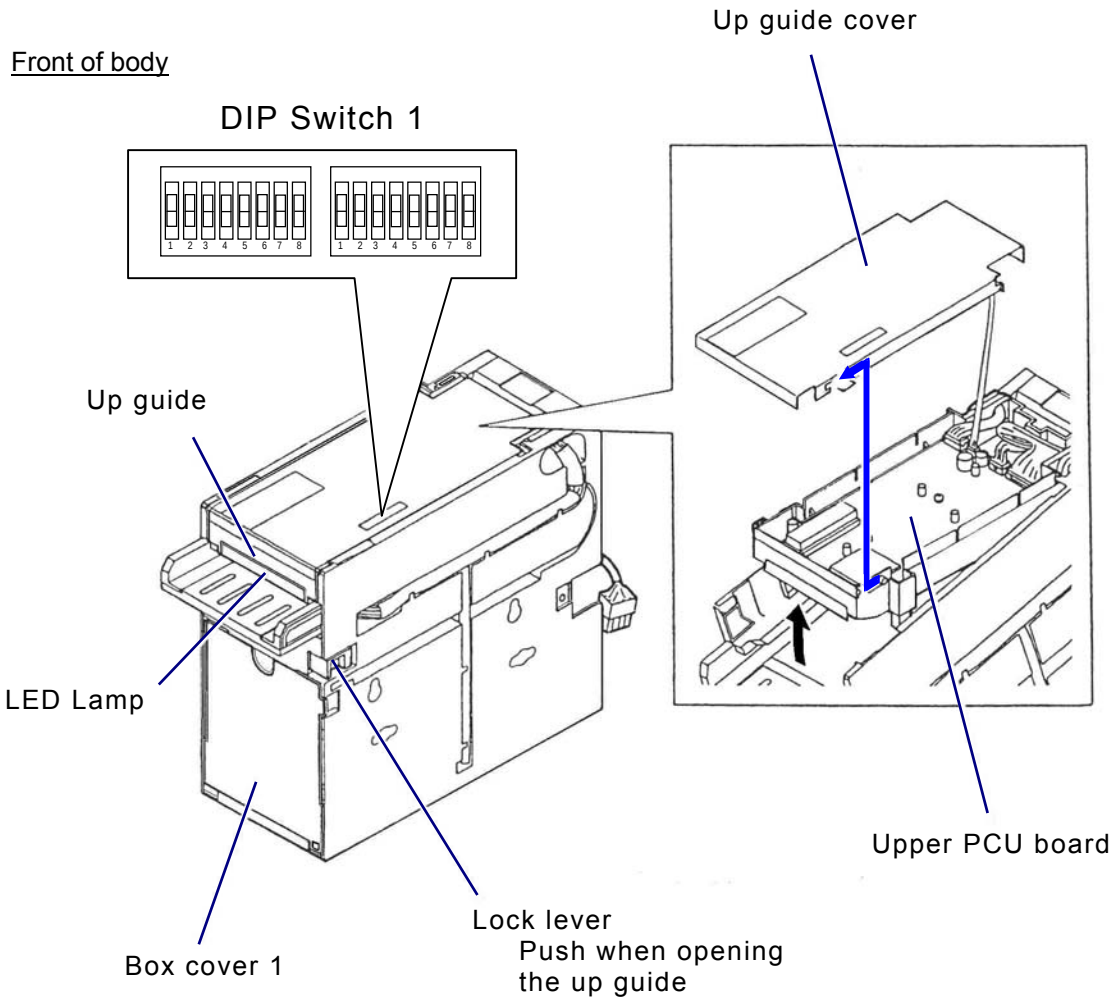
1 Appearance of body 2
2 Appearance of safe 3
2-1 Type and meaning of warning 3
2-2 Note in handling 4

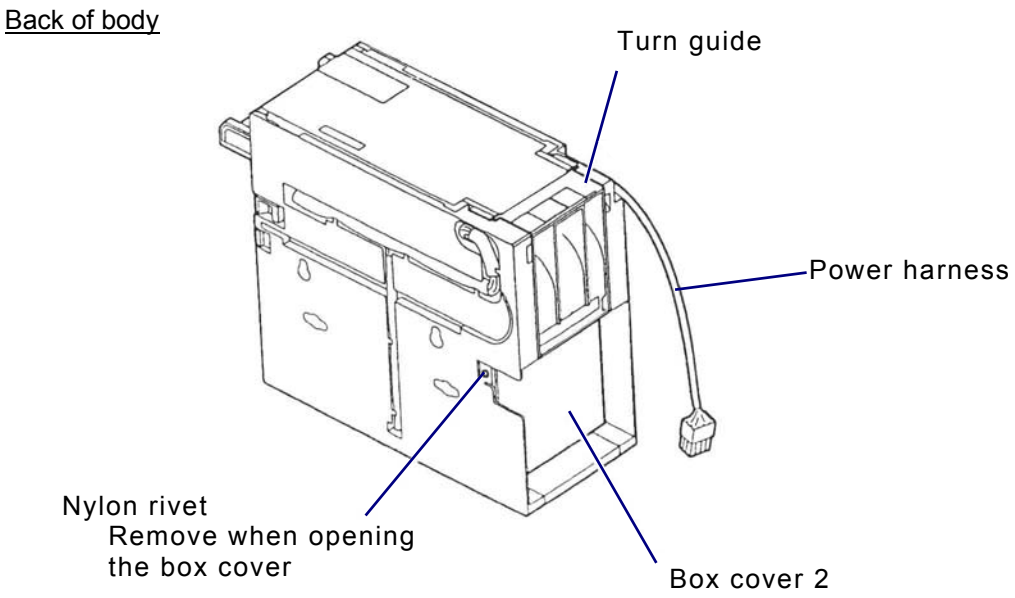
Introduction

This manual describes note in use of this unit.

Read this manual carefully before work for using the systems safely.

1 Appearance of body





2 Assurance of safety

2-1 Type and meaning of warnings

Warning is classified and described in the text depending on greatness of danger and scale of danger and scale of assumed accident. Understand the meaning of warning terms below, and follow the direction of warning terms described on this manual in working.

Neglecting this warning may result in major injuries or great damage to property.
It is used only in the most dangerous situation.

Neglecting this warning may result in major injuries or great damage to property.
Read this manual carefully, and take enough care in handling.

Neglecting this warning may result in minor injury or damage to property.
Most of all is injury and property damage caused by familiarization.
Always take precautions.

Important:

Used for information which requires special attention or emphasis.
*used for information to be referred to in working.

2-2 Note in handling

General warning in operation this unit is described below:

Do not touch switch or button with wet hand. It may result in electric shock if grounding wire is defective.
Do not touch live part of equipment. It may result in electric shock.

Turn off power before assembling or inspection any part unless otherwise specified.
When any other equipment is connected to this unit, turn off power for all equipment.

Do not leave anything such as tool on equipment in operating. It may fall on movable part, resulting in damage to equipment.
In disassembling or inspecting equipment, place on a stable workbench.

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Assembly and Disassembly and cleaningProcedure

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	Page
Introduction	1
Disassembly of CPU Board	2
Cleaning	3

3 Sensor Adjustment

This manual describes disassembling procedure of this unit. Disassemble the unit only when repair of trouble and adjustment are required.

Assembling procedure is in principle the reverse of disassembling procedure.

In disassembling, this manual, related drawing, attachment to the unit, and tool are required.

Related drawing and tool

1. Wiring diagram
2. Precision screwdriver (Phillips)
3. Nipper (when binding of harness must be cut)

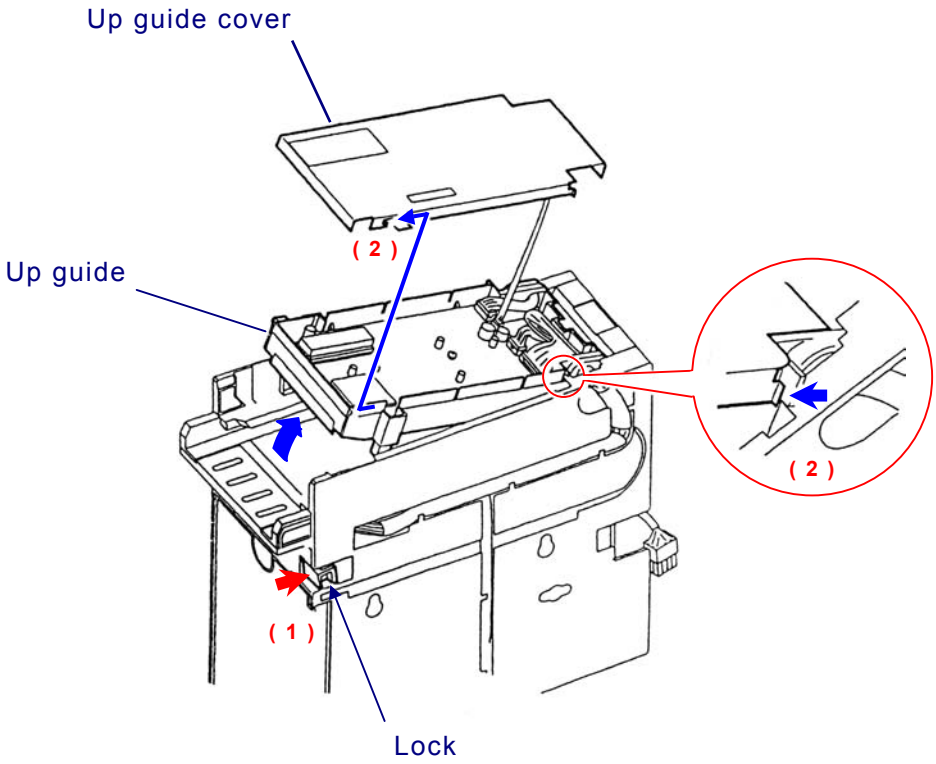
Be sure to turn off power for system in assembling and disassembling work.

High-voltage current is flowing inside the system, and may cause electric sock.

Disassembly of CPU board

1. Open the up guide with locking lever held down at the front of body.
2. Slide and remove the up guide cover with up guide opened.

Important
Open the up guide to an angle where lock of up guide cover can be released.



3. Remove all harness from connector of CPU board.

   Harness to be removed is four items shown below:

   Connector (pin10)

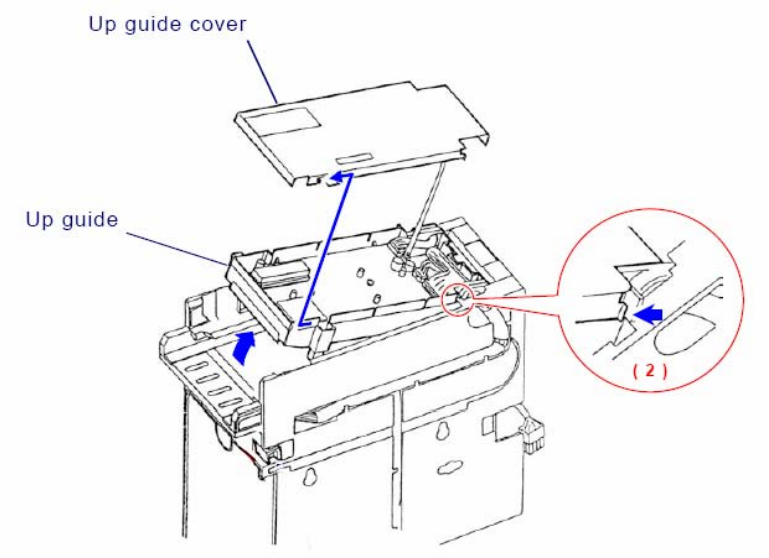
   Connector (pin 3)

   Connector (pin 8)

   Connector (pin12)

Maintenance:

It is important to keep the bill path, rollers, and belts clean.
The sensor lenses are transparent, and made of polymer material. Handle them with care.
Use a soft lint-free cloth or cotton bud to wipe out dirt and stain on the surface of magnetic and optical sensors, rollers and belts. Repeat the cleaning process as needed until the transport path is free of contaminants. Do not use alcohol or thinner for cleaning.



Please clean the lenses inside and in the transport unit included the belts carefully with none alcoholic fluides.

Dirty roller Dirty lenses
After cleaning After cleaning

10. Technical Support

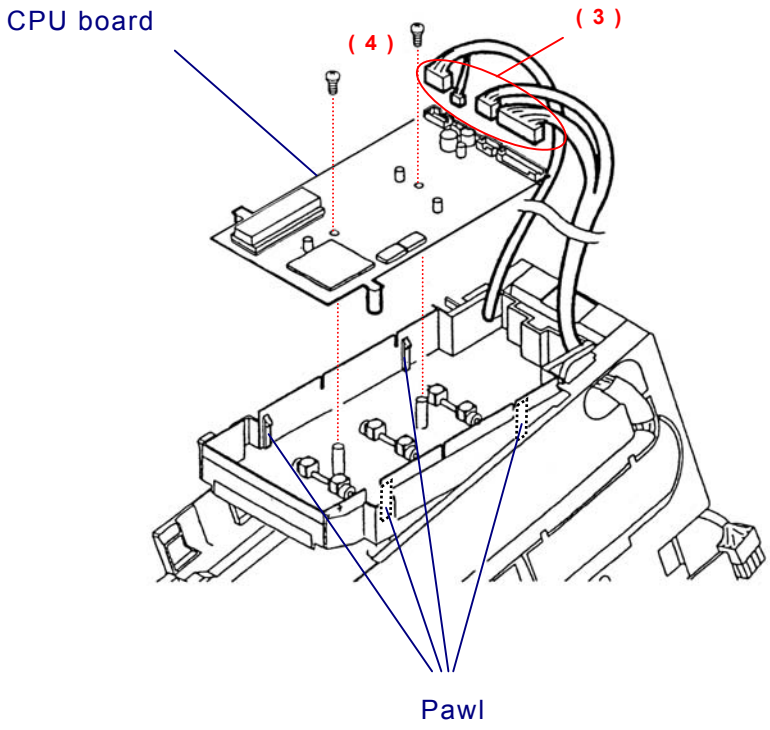
- Europe, Russia, Middle East, Africa -

Japan Cash Machine Germany GmbH Phone: +49 211 53064560 **Fax:** +49-211-53064585
Mündelheimer Weg 60 **e-mail:** info@jcm-germany.com **Website:** www.jcm-germany.com
D-40472 Düsseldorf Germany

- UK & Ireland -

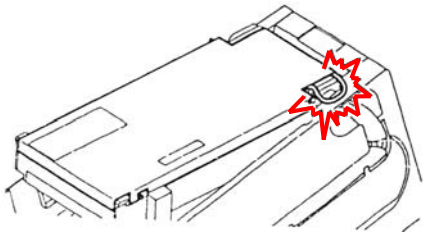
JCM United Kingdom Ltd. Phone: +44-(0)870-770-2863 **Fax:** +44 (0) 190-837-7834
Unit B, Third Avenue, **e-mail:** info@jcm-uk.com **Website:** www.jcm-uk.com
Denbigh West Business Park
Bletchley, Milton Keynes,
Buckinghamshire MK1 1EJ, UK

4. Remove 2 screws of CPU board, release pawl at 4 positions and remove CPU board.



Caution

In installing up guide cover, beware that harness is not pinched by cover.



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Adjustment Manual

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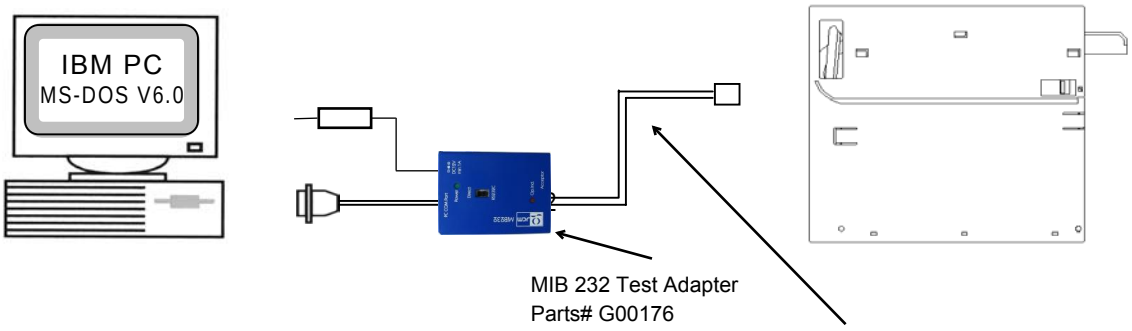
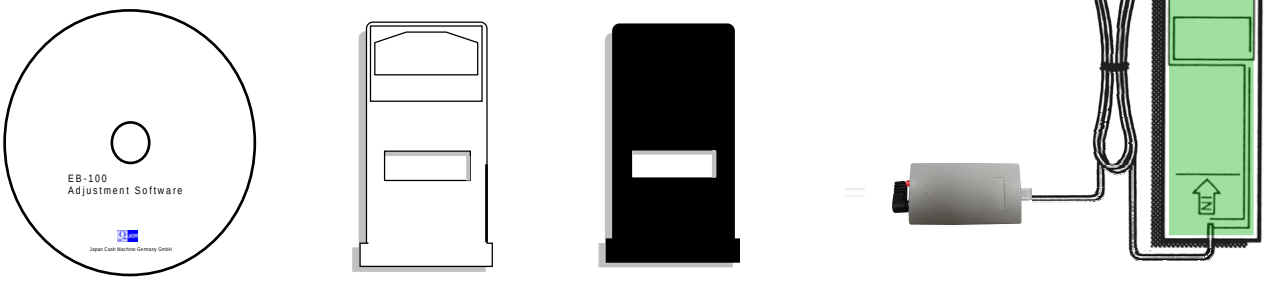
1 Connecting EB-100 to PC



Tools required for adjustment



Software ask
Support@jcm-germany.com

KS-304
#081308

KS-305
#081309

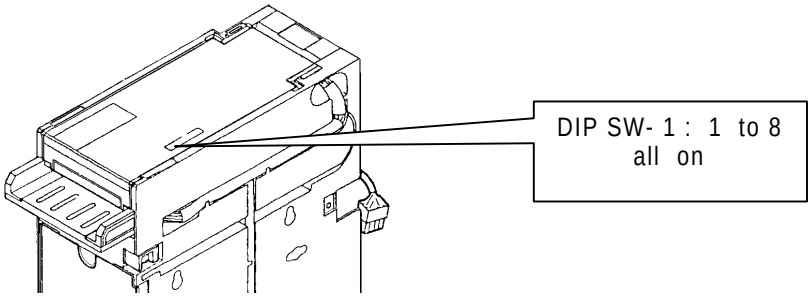
Mag.Tool MG-03
#G 00179

2 DIP-Switch Setting of EB-100

After the setting the DIP switch of EB-100, power ON the devices.

When the test mode starts, the red and green LEDs on the front face of acceptor will both light. This is the test standby state. Sensor adjustment and selection of various performance test are also performed in this state.

If the red and green LEDs both do not light, check the DIP-Switch setting. If the DIP-Switches are set correctly, check the ROM and CPU board (see “Troubleshooting” Chapter 6).



3 Sensor Adjustment

Tools required for adjustment

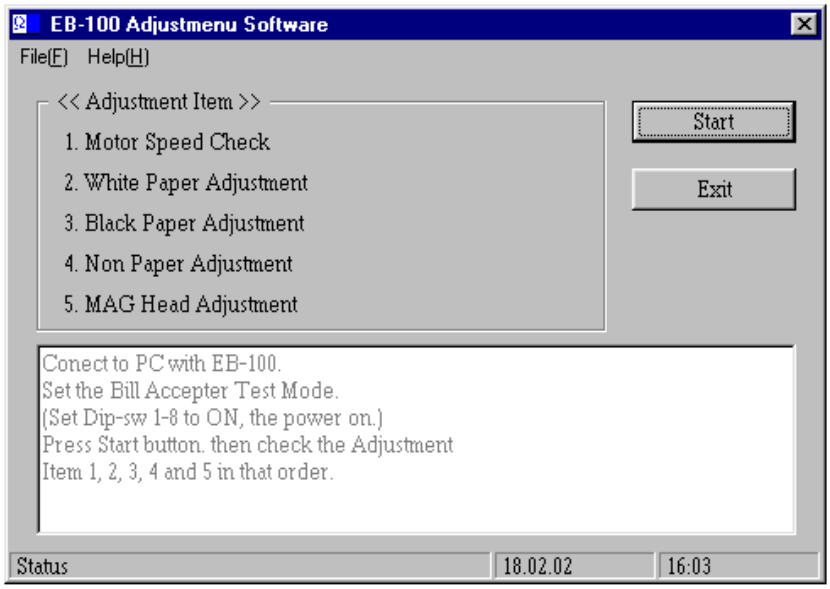
1. Environment for running the adjustment software

Personal computer : Must have at least one RS-232C communication port (Dusb-9 pin).
OS : Windows 95/98 or 2000

2. Operation the adjustment software

(1) Start up the adjustment software “EB-100.EXE”

(2) The main screen will appear.

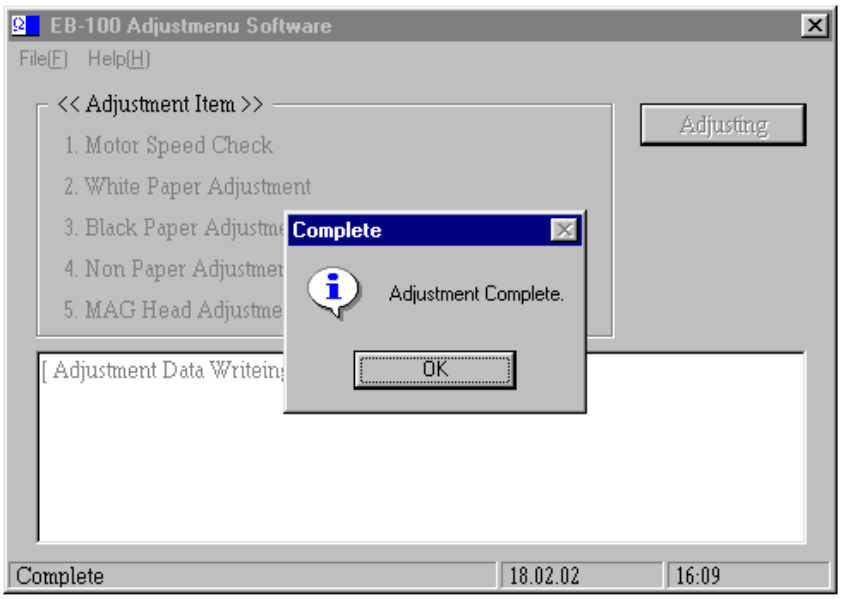


(3) Make sure that EB-200 is in the test mode standby state (the red and green LEDs on CPU board are lit). Also make sure that the tray of EB-200 is empty since adjustment starts from the motor speed check.

(4) Click “Start”. The EB-200 motor starts running and adjustment start.

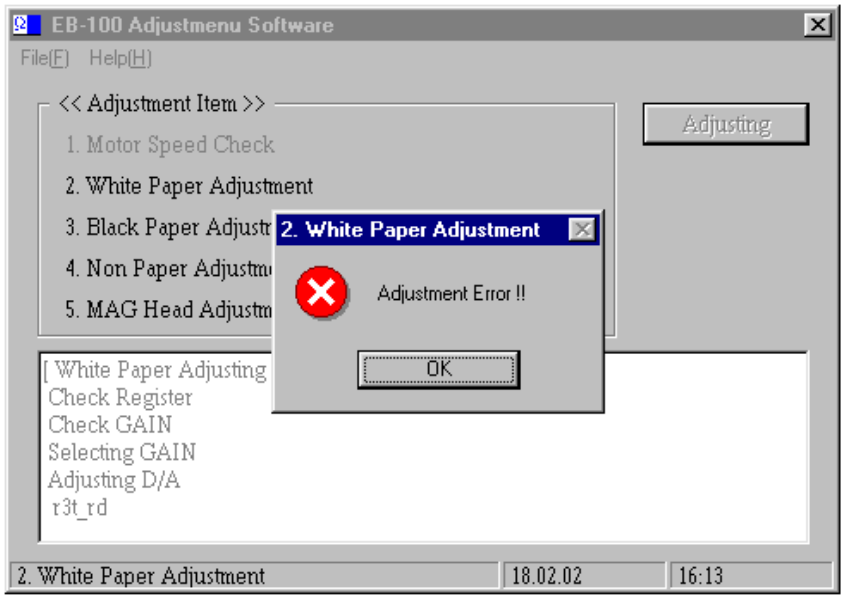
(5) After the adjustment of each item is completed, the following instruction will appear in the message area. “Perform adjustment sequentially in the order of the items displayed.”

(6) When all adjustment are done, “Complete” will appear in the message area.



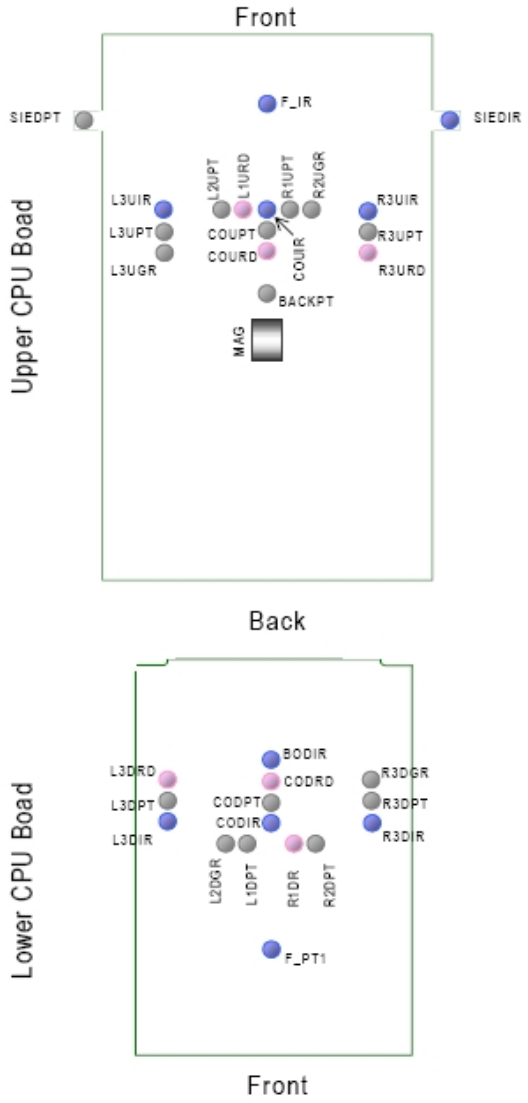
To return to the main screen, click “OK”.

(7) If an adjustment is not performed successfully, “Error” will appear in the message area together with the location of sensor where the trouble is.



Click “OK” to return to main screen and adjust again from the beginning.

EB-200 Sensor error code and part numbers E B-100/200

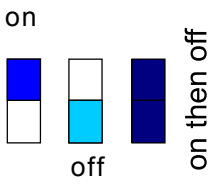


Code	Sensor	Sensor Name	EDP Number
l3t_ir	L3UPT/L3DIR	TPK 302 / IRL 3025	067394 / 067395
l3t_gn	L3UGR/L3DPT	GPL 300 / TPK 302	067397 /067394
l3d_ir	L3DIR	IRL 3025	067395
l3d_rd	L3DRD	RPL 302	067396
l3u_ir	L3UIR	IRL 3025	067395
l3u_gn	L3UGR	GPL 300	067397
c0t_ir	C0UPT/C0DIR	TPK 302 / IRL 3025	067394 / 067395
c0t_rd	C0URD/C0DPT	RPL 302 / TPK 302	067396 /067394
c0d_ir	C0DIR	IRL 3025	067395
c0d_rd	C0DRD	RPL 302	067396
c0u_ir	C0UIR	IRL 3025	067395
c0u_rd	C0URD	RPL 302	067396
r3t_ir	R3UPT/R3DIR	TPK 302 / IRL 3025	067394 / 067395
r3t_rd	R3URD/R3DPT	RPL 302 / TPK 302	067396 / 067394
r3d_ir	R3DIR	IRL 3025	067395
r3d_gn	R3DGR	GPL 300	067397
r3u_ir	R3UIR	IRL 3025	067395
r3u_rd	R3URD	RPL 302	067396
l1t_rd	L1URD/L1DPT	RPL 302 / TPK 302	067396 / 067394
r1t_rd	R1UPT/R1RD	TPK 302 / RPL 302	067394 / 067396
l2t_gn	L2UPT/L2DGR	TPK 302 / GPL 300	067394 / 067397
r2t_gn	R2UGR/R2DPT	GPL 300 / TPK 302	067397 / 067394
b0t_ir	B0DIR/BACKPT	IRL 3025 / TPK 302	067395 / 067394
f0t_ir	R_IR	IRL 3025	067395
c0d_mg	MAG	BS 5T1HGAB	063391
s0t_ir	SIEDPT/SIEDIR	TPK 302 / IRL 3025	067394 / 067395

4 Test mode

Selection of test mode

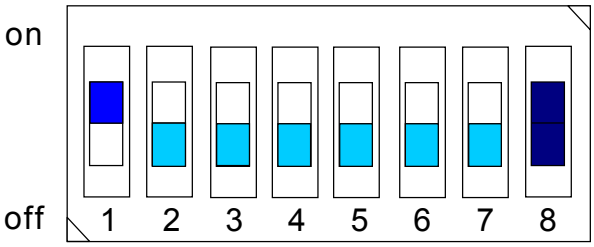
1. To enable test mode turn DSW1-8 on, and DSW1-1 to DSW1-7 off, then power up.
2. Red LED will be on, Green LED will flash on the face plate of unit.
3. Select a test mode
4. To enable and disable test mode
   DSW1-8 on : Test Disabled
   DSW1-8 off : Test Enabled



Test mode settings

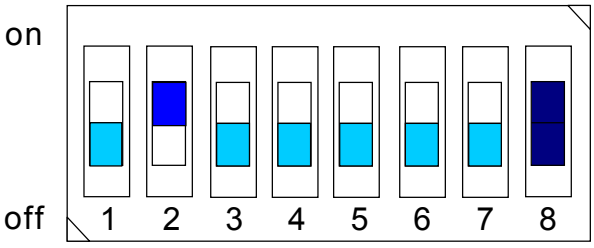
DIP Switch 1

Motor forward test



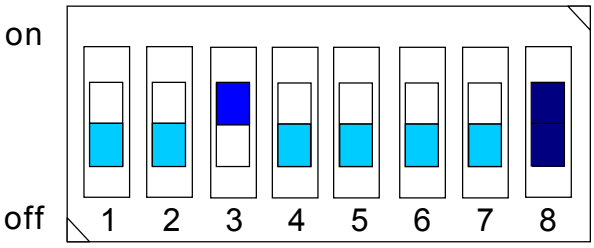
-1 and 8 on
-Power up
-Turn 8 off
-Ready

Motor reverse test



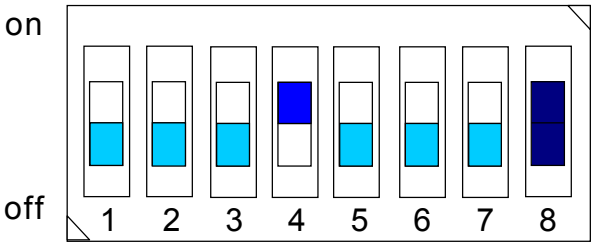
-2 and 8 on
-Power up
-Turn 8 off
-Ready

Stacker test



-3 and 8 on
-Power up
-Turn 8 off
-Ready

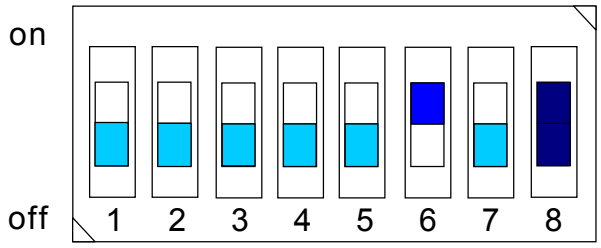
Aging test



-4 and 8 on
-Power up
-Turn 8 off
-Ready

Acceptor sensor test

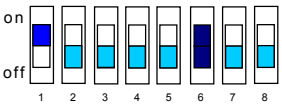
DIP Switch 1



Step 1

-6 and 8 on
-Power up
-Turn 8 off
-Go to step 2

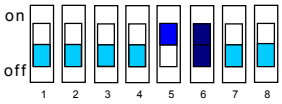
Sensor F_IR/ F_PT



Step 2

-Turn 1 on
-Turn 6 off

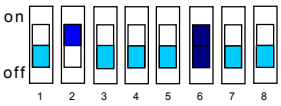
Sensor C0URD/ C0DPT



Step 2

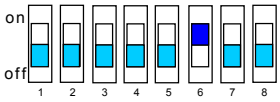
-Turn 5 on
-Turn 6 off

B0DIR/ BACKPT

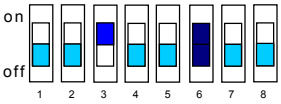


-Turn 2 on
-Turn 6 off

R3URD/ R3DPT

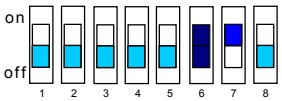


R1DRD/ R1UPT



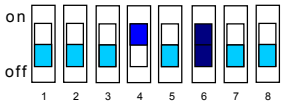
-Turn 3 on
-Turn 6 off

L3UGR/ L3DPT



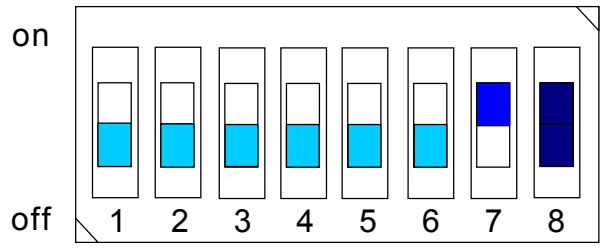
-Turn 7 on
-Turn 6 off

L1URD/ L1DPT



-Turn 4 on
-Turn 6 off

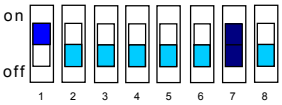
Stacker sensor test



Step 1

-7 and 8 on
-Power up
-Turn 8 off
-Go to step 2

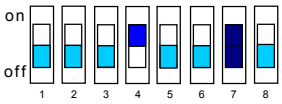
Sensor PSI: Vend Lever



Step 2

-Turn 1 on
-Turn 7 off

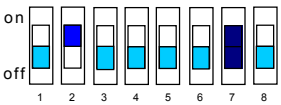
Sensor DOOR



Step 2

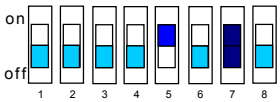
-Turn 4 on
-Turn 7 off

PSO: Stack Lever



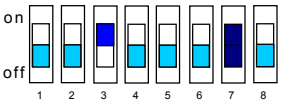
-Turn 2 on
-Turn 7 off

FULL



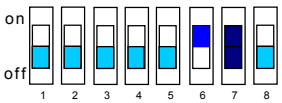
-Turn 5 on
-Turn 7 off

HOME Pusher



-Turn 3 on
-Turn 7 off

ENCORDER



-Turn 6 on
-Turn 7 off

Lever1 :	there is a bill	DOOR :	door is open
	green LED will be on		green LED will be on
Lever2 :	there is a bill	Full :	micro SW is on
	green LED will be on		green LED will be on
Pusher :	pusher is home position	Encoder :	turning encoder
	Green LED will be on		green LED will be on

Sensor location

① PSI (Lev 1)

② PSO (Lev 2)

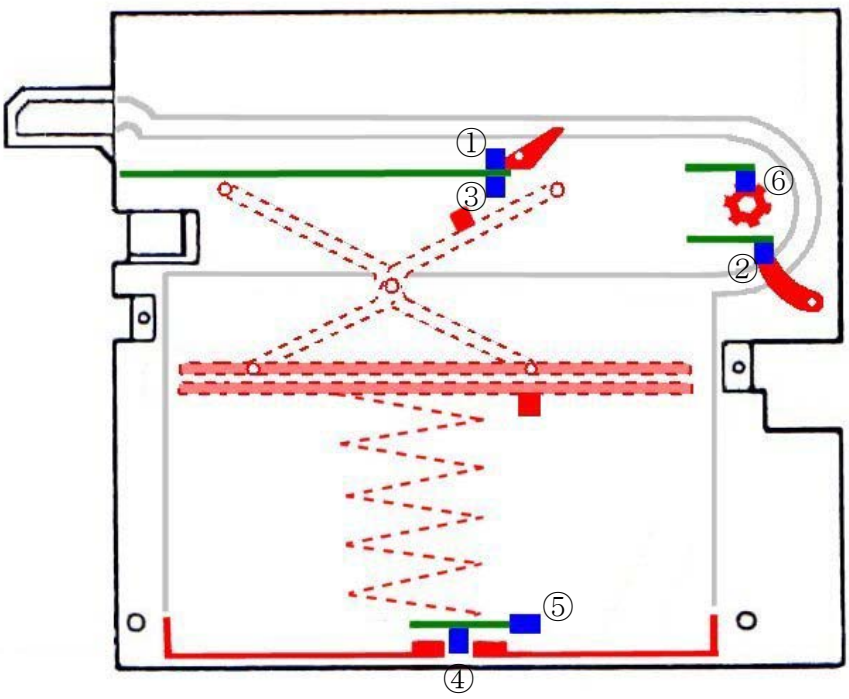
③ HOME (Pusher)

④ DOOR

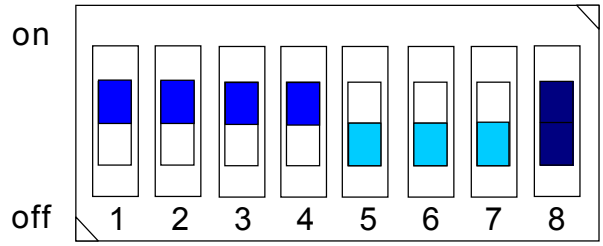
⑤ FULL (Stacker)

⑥ Encoder (Motor)

sensor
sensor flag
sensor board

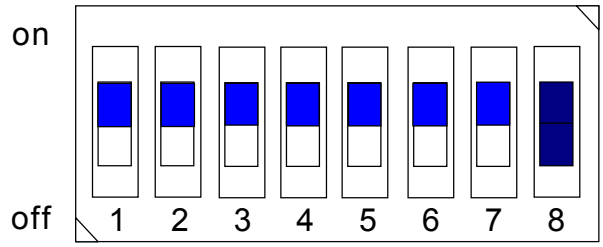


Acceptance test



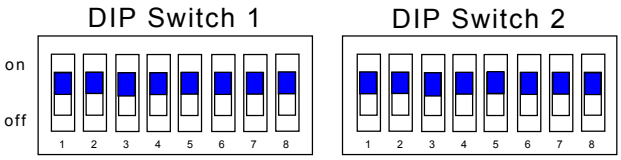
-1, 2, 3, 4, 8on
-Power up
-Turn 8 off
-Ready

Dipswitch test



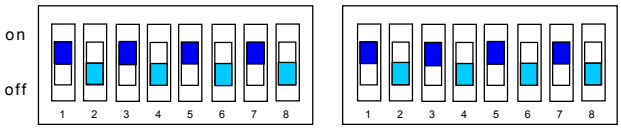
Step 1

-1 to 8 on
-Power up
-Turn 8 off
-Go to step 2



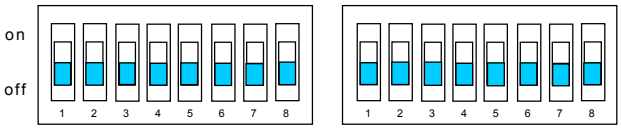
Step 2

- all on



Step 3

- 1, 3, 5, 7 on each DSW on



Step 4

- all off

When all DIP Switches are OK, the green LED will flash after Step 4.

Europe Bill Acceptor

EB-100
EB-200

Troubleshooting

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Contents

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	System is in serial mode	3
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	Others (system code check)	3
	Bill is returned	5
	Bill is not accepted at all	6
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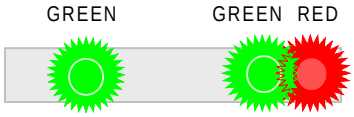
	Rejection code	8
3	Work Procedure for bill jamming error	9

Introduction

This manual describes how to find the cause of troubles on this unit.
If any trouble should occur, refer to this manual for solving as soon as possible.
In order to make full and effective use of the capabilities of this unit, read the instruction manual and related material as well, and bear in mind to handle the unit properly, inspect and clean the unit on a routine basis.

1 Reference for errors

LED indication is on the front of acceptor (over the bill insertion port)

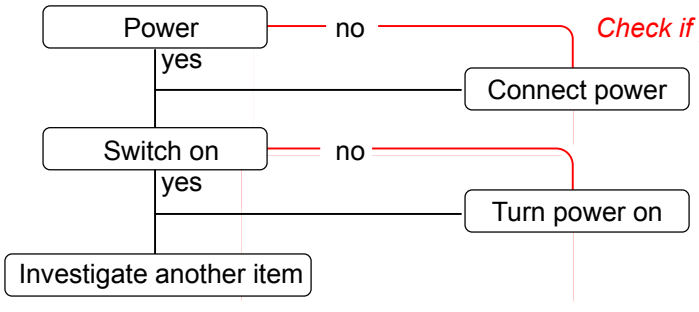


LED indication of EB-100/200

Type of errors

Acceptor is not in stand-by mode	Condition of LEDs	
Power is off	off	off off
In serial mode	off	off off
In test mode	flash	flash on
Others (system code check)	off	off flash
Bill is returned	on	on flash
Bill is not accepted	off	off flash

Power is off



System is in serial mode

System is in serial mode

DSW-2/no.1 is on — no — *Check the position of DSW-2/no.1*

yes

Turn on DSW-2/no.1

Obtain acceptance permission from host — ***still does not work in serial mode*** — Investigate another item

System is in test mode

System is in test mode

DSW-1/no.8 is on — no — *Check the position of DSW-1/no.8*

yes

Turn on DSW-1/no.8

Turn power on again — ***still does not work in test mode*** — Investigate another item

Others (System code check)

System code check

Check the status when power is turned on

Continues bill rejection — no

yes

If "no"

Check the number of red LED flashings on the bill insertion port and solve problem with reference to "system code list".

Up guide is opened — no

yes

Close up guide

no — foreign substance is on transport route

yes

Remove it

go to A-1

Turn guide is opened — no

yes

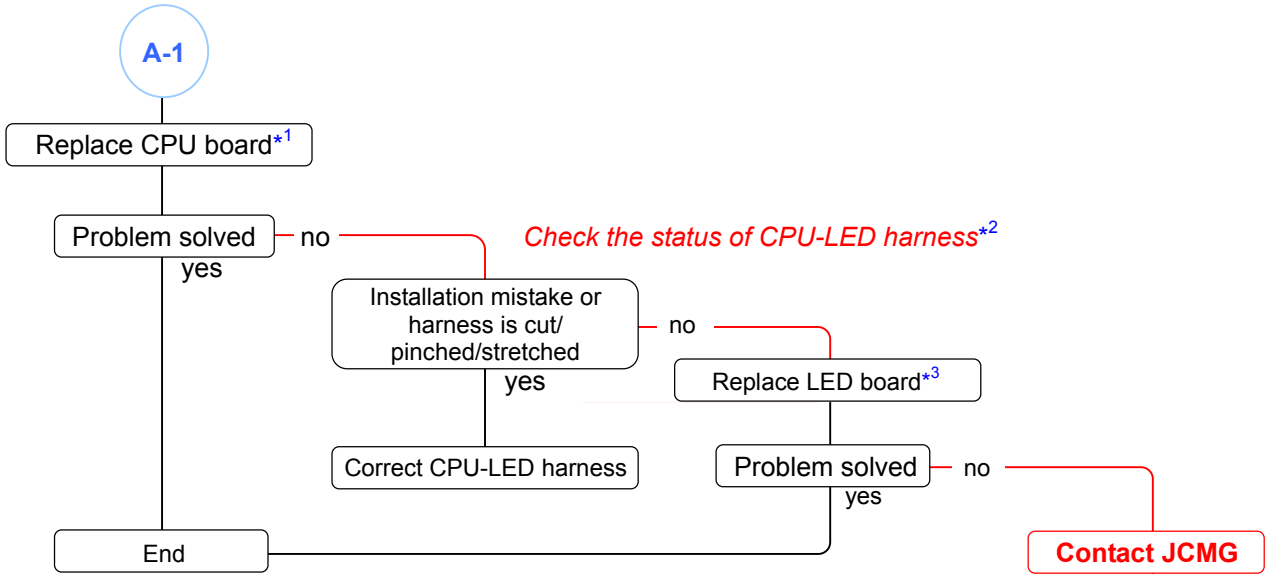
Close turn guide

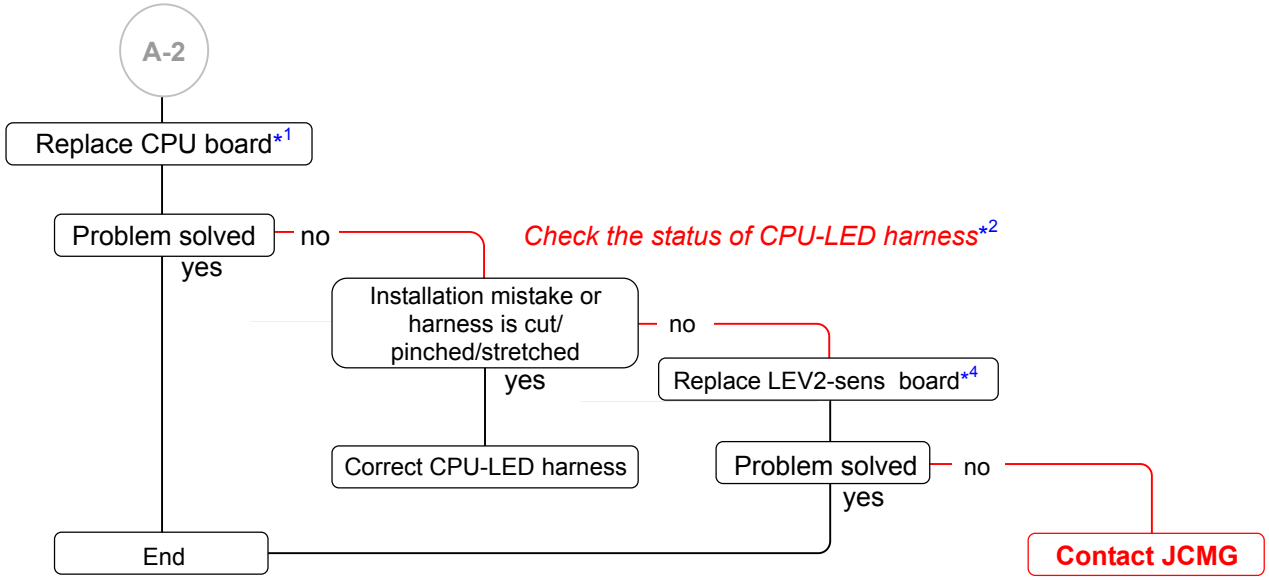
no — foreign substance is on transport route

yes

Remove it

go to A-2

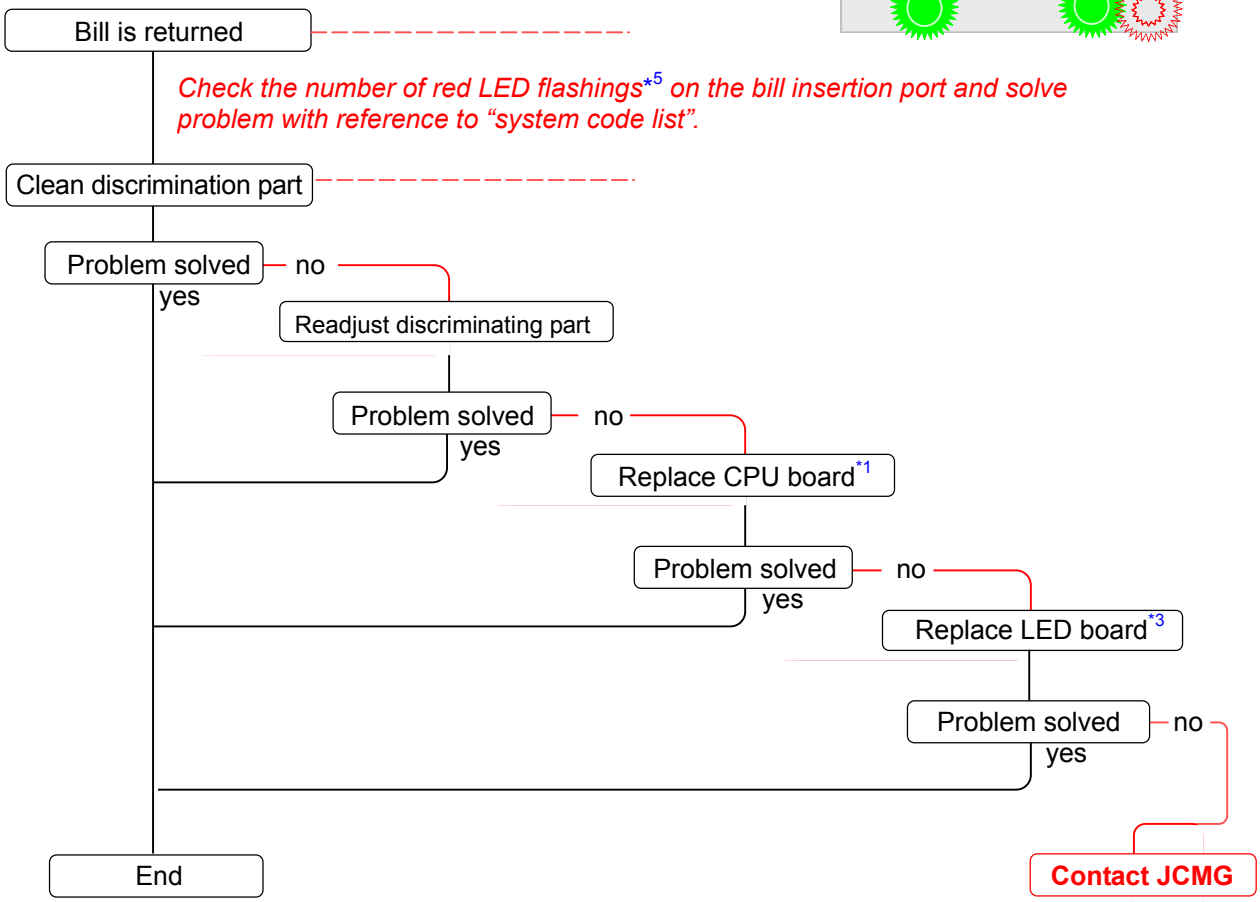




*1 : CPU board - EDP No.: 070786
*2 : CPU-LED harness - EDP No.: 072014
*3 : LED board - EDP No.: 070787
*4 : LEV2-sens board - EDP No.: 071928

Refer to “Parts List”

Bill is returned



*5 : treat separately for following rejection codes

once / 5 times : insert the bill again

9 times : Check setting

10 times : Returned by order from host

Refer to "Rejection code"

Bill is not accepted at all

Bill is not accepted at all

Red LED off — no — *Check the number of red LED flashings on the bill insertion port and solve problem with reference to "system code list".*

yes

Power on — no — *check if power supply is connected* → Connect power

yes

Switch on — no → Turn power on

yes

Check the acceptance INHIBIT setting of dipswitch

Setting is correct — no — *Check the acceptance INHIBIT setting again*

Check the acceptance permission from host

Replace CPU board

Problem solved — no — *Check the status of voltage regulator*

Installation mistake or wire is cut — no — *Check the status of power harness*[*6]

correct voltage regulator

Installation mistake or harness is cut — no — *Check the status of CPU-LED harness*[*2]

Correct power harness

Installation mistake or harness is cut — no

Correct CPU-LED harness

End

Contact JCMG

*[6] : Power harness - EDP No.: 072012

2 Remedies against errors

System Code

LED flashing on bill insertion port shows the error when the bill is not returned.
Check the system code shown below and reset the error.

System code list

Number of LED flashings	Description of display	Description of remedy and check
1	Stacker full	Reclaim bills in storage unit
2	Stacker jammed	Check inside of storage unit Check operation of stacker home sensor
3	Transport route jammed (1)	Check if bills are left in the vicinity of stacker lever
4	Transport route jammed (2)	Check if bills are left on transport route
5	Motor speed error	Check whether foreign substance is placed on transport route Check operation of motor unit
6	Motor stop error	Check for bills left on transport route Check operation of motor unit
10	Storage door opened	Close the box cover completely
12	Error by fraud behaviour	Sensor turned on in a timing impossible in normal operation

Important

LED flash timing

In flashing, LED flashes > turn off > flashes … (called flashing count hereafter), then turns off (interval), and flashing is counted again.

Respective operation time is as follows:

Flashing time (per flashing count)
Light-on time: 1.0 sec
Light-off time: 0.4 sec

Interval
Light-off time: 2.5 sec

Rejection Code

LED flashing on bill insertion port shows the error when the bill is returned.
Check the rejection code shown below and reset the error.

Rejection code list

Number of LED flashings	Description of rejection
1	Rejection by bill insertion trouble
2	Rejection by magic sensor trouble
3	Rejection by residual bill (1) , Relating to transport section
4	Rejection by optical sensor trouble (1)
5	Rejection by transport trouble
6	Rejection by denomination determination
7	Rejection by optical sensor trouble (2)
8	Rejection by optical sensor trouble (3)
9	Rejection by INHIBIT (acceptance inhibition)
10	Rejection by direction to return bill (Only when Escrow feature is permitted)
11	Rejection by stacker lever trouble
12	Rejection by residual bill (2), Relating stacker assembly
13	Rejection by roll length
14	Rejection by optical sensor trouble (4)
15	Rejection by optical sensor trouble (5)

Important

When bill rejection occurs frequently, clean the transport route.

LED flash timing

In flashing, LED flashes > turn off > flashes … (called flashing count hereafter), then turns off (interval), and flashing is counted again.

Respective operation time is as follows:

Flashing time (per flashing count)
Light-on time: 0.4 sec
Light-off time: 0.4 sec

Interval
Light-off time: 2.5 sec

3 Work Procedure for bill jamming error

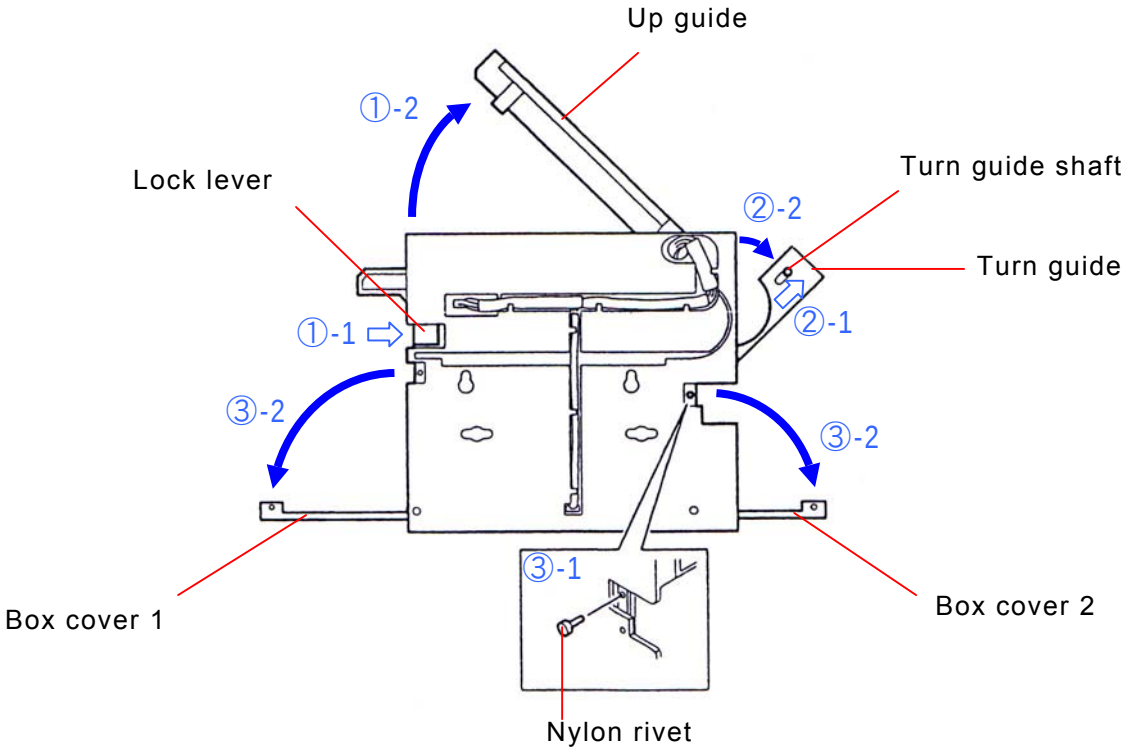
When the error bill jamming occurs the following procedure can be followed:

1. Watch LED lamp flashing on bill insertion port, and check system code or rejection code.
2. Remove jammed bill.

   Remove the jammed bill with reference to side view below.

   ① Open the up guide with lock lever held down and check for bill jamming.

   ②Lift up the turn guide shaft, and open the box cover to check for bill jamming.



3. When checking work is required, check in accordance with system code or rejection code.

Europe Bill Acceptor

EB-100
EB-200

Parts List

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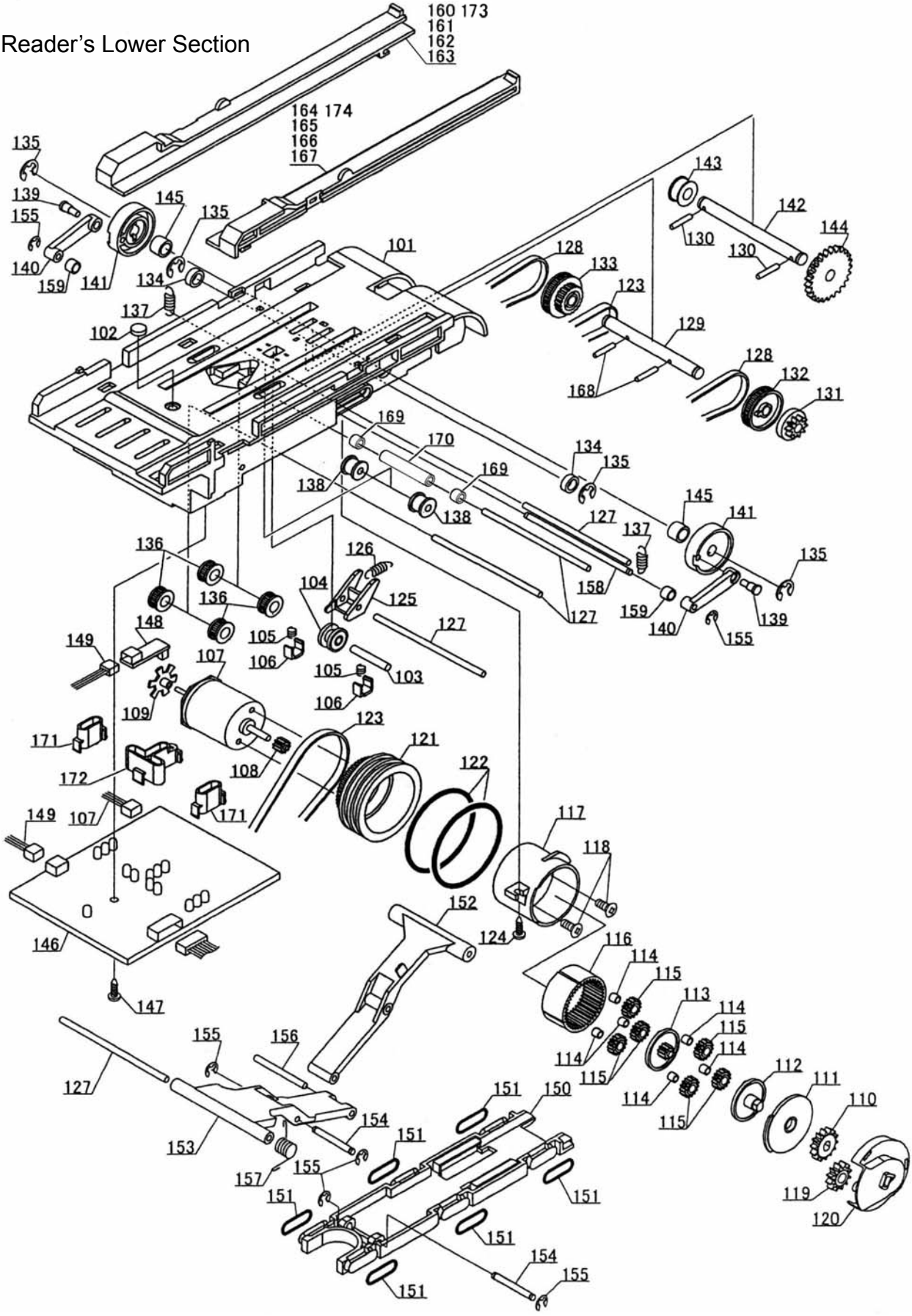
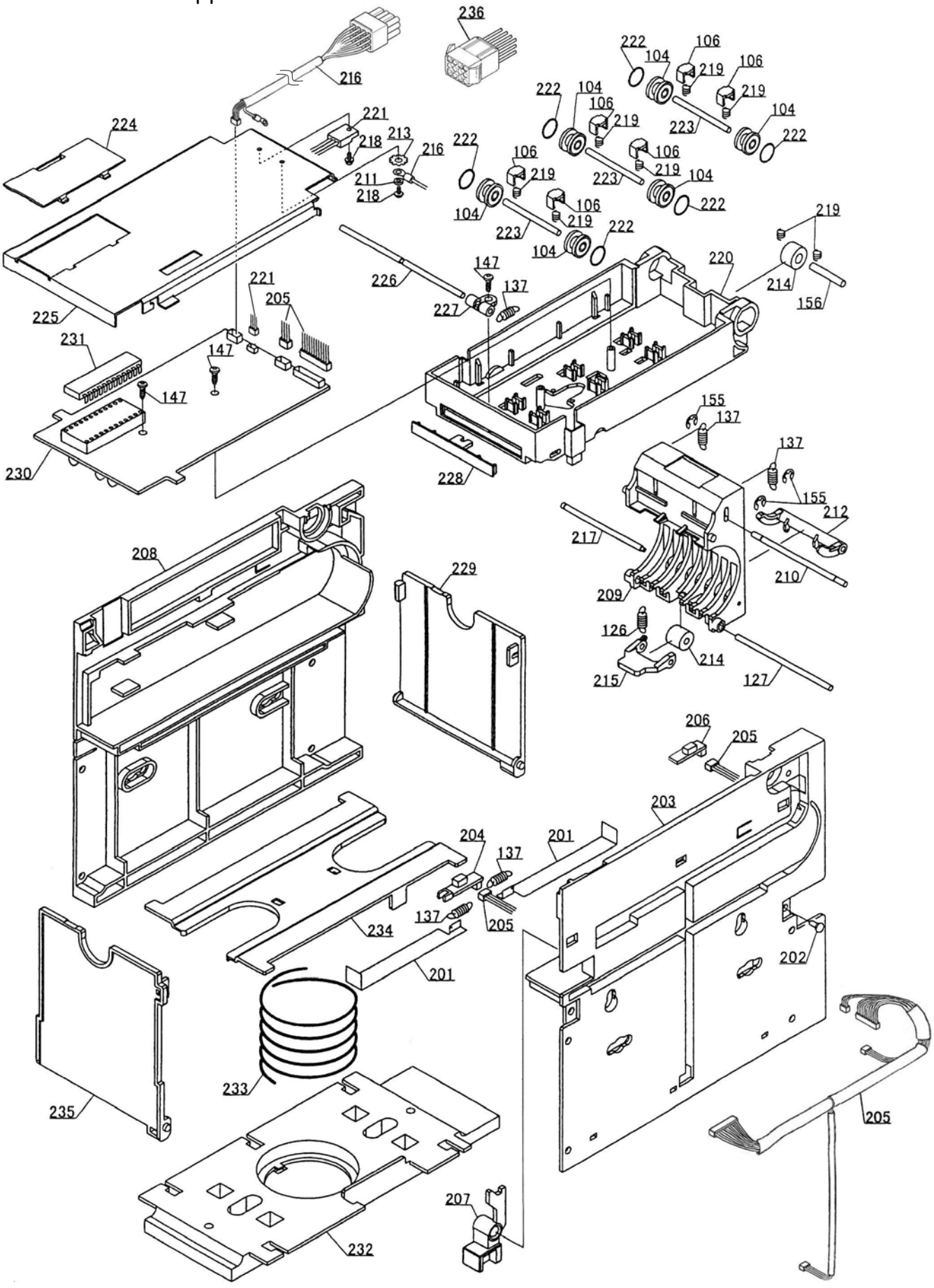
Parts Diagram

Reader's Lower Section



Reader's Upper Section



Parts List

Reader's Lower Section

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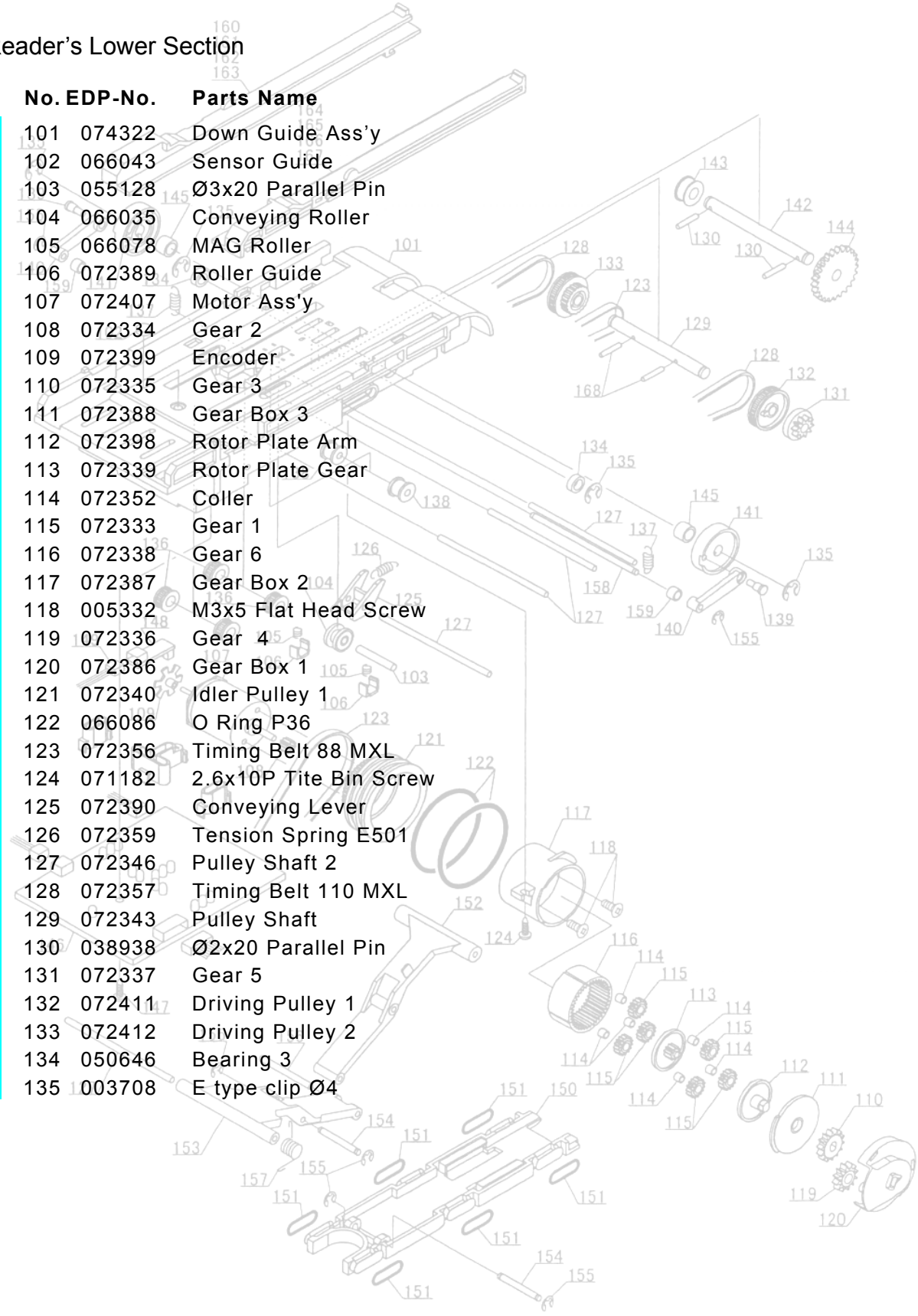
No.	EDP-No.	Parts Name
101	074322	Down Guide Ass'y
102	066043	Sensor Guide
103	055128	Ø3x20 Parallel Pin
104	066035	Conveying Roller
105	066078	MAG Roller
106	072389	Roller Guide
107	072407	Motor Ass'y
108	072334	Gear 2
109	072399	Encoder
110	072335	Gear 3
111	072388	Gear Box 3
112	072398	Rotor Plate Arm
113	072339	Rotor Plate Gear
114	072352	Coller
115	072333	Gear 1
116	072338	Gear 6
117	072387	Gear Box 2
118	005332	M3x5 Flat Head Screw
119	072336	Gear 4
120	072386	Gear Box 1
121	072340	Idler Pulley 1
122	066086	O Ring P36
123	072356	Timing Belt 88 MXL
124	071182	2.6x10P Tite Bin Screw
125	072390	Conveying Lever
126	072359	Tension Spring E501
127	072346	Pulley Shaft 2
128	072357	Timing Belt 110 MXL
129	072343	Pulley Shaft
130	038938	Ø2x20 Parallel Pin
131	072337	Gear 5
132	072411	Driving Pulley 1
133	072412	Driving Pulley 2
134	050646	Bearing 3
135	003708	E type clip Ø4



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No.	EDP-No.	Parts Name
136	072410	Idler Pulley 2
137	072360	Tension Spring E561
138	052502	V Roller 1
139	072351	Arm Stud
140	072379	Pusher Arm 3
141	072380	Pusher Arm 4
142	072342	Gear Shaft
143	072341	Roller
144	072332	Clutch Gear
145	052561	Bush Ø6B
146	070787	LED Substrate Unit
147	063250	2.6x6 P Tight Bind Screw
148	057186	Photo Interrupter Unit
149	072013	Encoder Harness
150	072376	Pusher Plate
151	034864	O Ring P11
152	072377	Pusher Arm 1
153	072378	Pusher Arm 2
154	072350	Arm Shaft 2
155	003705	E type clip Ø2
156	072362	Ø3x25 Parallel Pin
157	072409	Pusher Spring
158	072345	Arm Shaft 1
159	072358	C304 Spacer
160	072401	Side Block 67 L
161	072403	Side Block 71 L
162	072405	Side Block 73 L
163	072331	Side Block 77 L
164	072400	Side Block 67 R
165	072402	Side Block 71 R
166	072404	Side Block 73 R
167	072406	Side Block 77 R
168	075967	Ø2x10 Spring Pin
169	005763	Pulley Shaft Spacer 3x5
170	086076	Pulley Shaft Spacer 3x22
171	072308	Sensor Spacer 2
172	072307	Sensor Spacer
173	088189	Side Block EUR R
174	088190	Side Block EUR L

Reader's Upper Section

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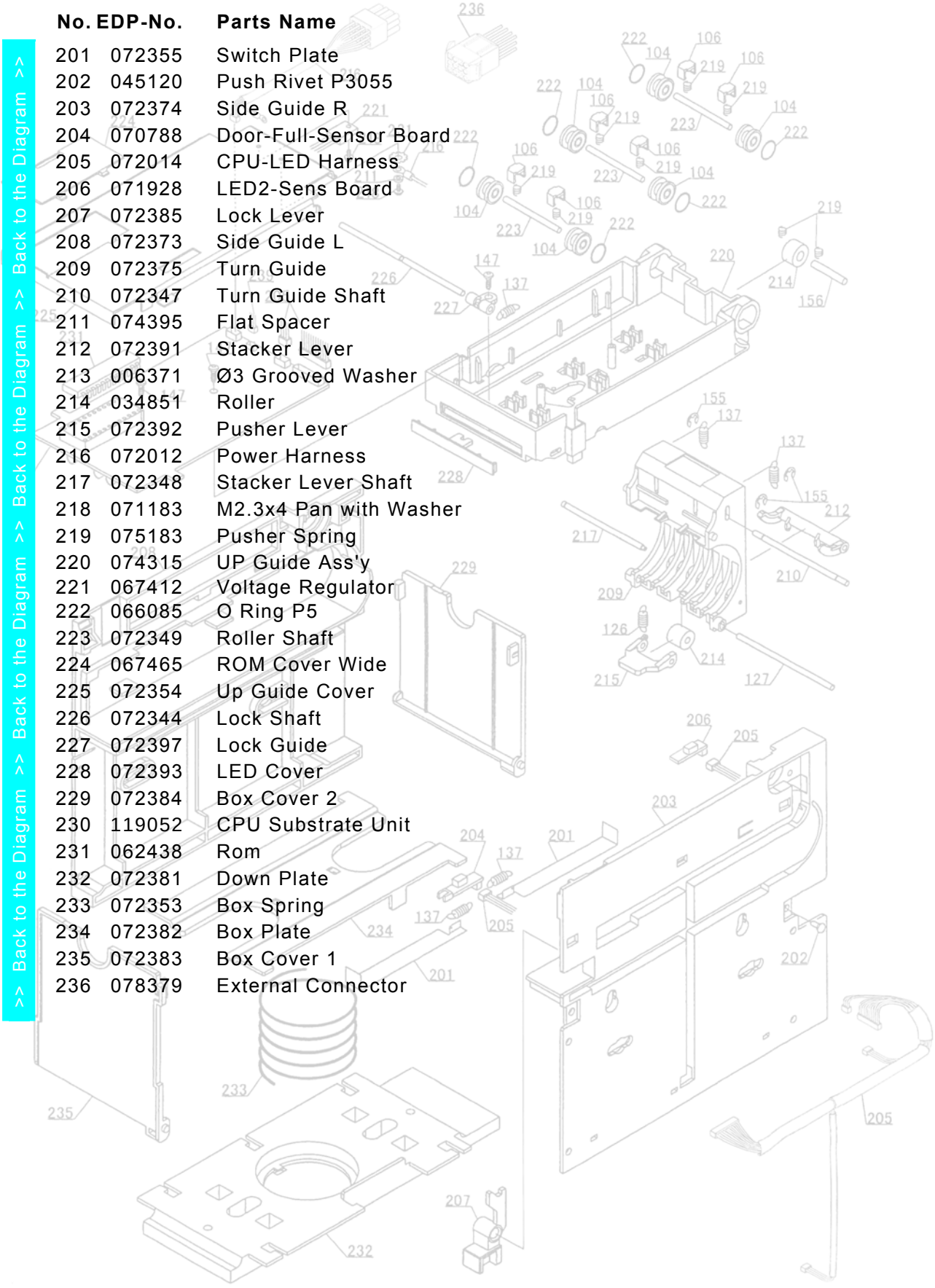
No.	EDP-No.	Parts Name
201	072355	Switch Plate
202	045120	Push Rivet P3055
203	072374	Side Guide R
204	070788	Door-Full-Sensor Board
205	072014	CPU-LED Harness
206	071928	LED2-Sens Board
207	072385	Lock Lever
208	072373	Side Guide L
209	072375	Turn Guide
210	072347	Turn Guide Shaft
211	074395	Flat Spacer
212	072391	Stacker Lever
213	006371	Ø3 Grooved Washer
214	034851	Roller
215	072392	Pusher Lever
216	072012	Power Harness
217	072348	Stacker Lever Shaft
218	071183	M2.3x4 Pan with Washer
219	075183	Pusher Spring
220	074315	UP Guide Ass'y
221	067412	Voltage Regulator
222	066085	O Ring P5
223	072349	Roller Shaft
224	067465	ROM Cover Wide
225	072354	Up Guide Cover
226	072344	Lock Shaft
227	072397	Lock Guide
228	072393	LED Cover
229	072384	Box Cover 2
230	119052	CPU Substrate Unit
231	062438	Rom
232	072381	Down Plate
233	072353	Box Spring
234	072382	Box Plate
235	072383	Box Cover 1
236	078379	External Connector



Japan Cash Machine Bill Acceptors
Service Manual
EB-100/200

First release 2002

Technical bulletins will be added to ourweb site
for any technical and/or manual updates

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